

Fire Research Report

A Strategy for Developing Greater Community Responsibility for Fire Safety & Prevention

CM Research

August 2000

This project set out to ascertain the views of the general public on fire safety, what constitutes safe and unsafe behaviour, and where people think responsibility for fire safety lies. The project made use of well established techniques of Computer Aided Telephone Interviewing (CATI) which ensure as far as possible a random cross section of the population is interviewed and that consistency in the interviewing technique is preserved. Interviews were conducted with 750 people. The survey looked at smoke alarm usage, other fire safety equipment, escape plans, fire safety behaviour, attitudes to fire safety and risk, responsibility for fire safety and fire safety communication. The study concludes with a series of recommendations for action to help the Fire Service in its communications

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**A Strategy for Developing Greater
Community Responsibility
For Fire Safety and Prevention**

Prepared for:

New Zealand Fire Service

August 1999

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1.0 Background and Objectives

The Fire Service is placing increasing emphasis on the community to accept greater responsibility for adopting “preventative” fire safety attitudes and behaviour.

Previous research conducted by CM Research revealed that a significant proportion of the population (21%) believe that fire safety and prevention is solely the responsibility of the Fire Service.

The intended outcome for preventative fire measures being undertaken at home through greater community responsibility is the reduction in the incidence and consequence of fire.

In doing so, the community must better understand the hazards of fire and take greater “ownership” of combating the fire problem. It is recognised that different sections of the community will have different attitudes, behaviours and learning requirements with respect to fire safety and prevention.

CM Research was contracted by the New Zealand Fire Service, via the contestable research fund, to undertake research to determine, overall, the extent to which fire safety messages were getting through to people, and how greater community responsibility could be encouraged.

Our overall research objectives were three-fold:

1. To contribute to a **better understanding** of what people do and do not know to do in the fire safety and prevention arena, and the reasons behind these;
2. To ascertain which sections of the community are vulnerable to “unsafe” practices, and need to take greater responsibility and;
3. To determine how the Fire Service can **communicate more effectively** to these “at risk” groups within the community so that they respond in a positive way.

It was important that our research programme examined the different communications and learning needs of different segments of the community in a way that past efforts have not addressed.

Specific information requirements in support of our objectives were as follows:

- To explore the range of public attitudes towards fire safety and prevention, i.e. where and how does this feature in people’s every day lives?
- Understand what different community groups perceive as constituting fire safety
- Define specifically what the various segments regard as “unsafe” practices
- Ascertain who is perceived to be responsible for fire safety, and the basis for these perceptions, eg what barriers need to be overcome and what misconceptions

addressed? How did people get their “independent” views and what can we learn from this?

- Identify and profile those groups perceived to be most “at risk” of unsafe fire behaviour, and those lacking adequate knowledge, i.e. who do we need to target?
- Identify the barriers and motivations to behaving in a “fire safe” manner, i.e. what influences different people to behave responsibly and what prevents/hinders responsible behaviour?
- Examine the effectiveness of current communications sources, i.e. which ones work well and why, and which ones don’t and why not?
- Identify the “hot buttons” for a communications strategy to individual segments, i.e. what are the key messages and style/medium of delivery most likely to change attitudes and influence behaviour?

2.0 Methodology

2.1 Research Methodology

To meet our information needs, a multi-stage research programme was recommended and adopted.

A qualitative stage involving face-to-face individual interviews with household members enabled us to investigate people's fire safety attitudes and behaviour in-depth, and identify the emotive "hot buttons" for a more effective communications strategy.

A quantitative stage involving telephone interviews with a statistically robust sample of the population enabled us to measure the incidence of these behaviours and attitudes, and help pin-point where future communications opportunities should be targeted.

Taken together, both stages provided a richer yield of information than if only either stage had been undertaken.

The following sections detail the approaches taken at each stage.

Qualitative Stage

Individual face-to-face interviews with householders at their home, rather than focus groups at our office, was the most effective way for us to understand peoples attitudes and behaviour, on what is a sensitive topic, in the context of their social and economic environment.

A total of n=21 households were interviewed. Where possible all household members were included in the discussion on fire safety and prevention, including children.

To ensure a broad range of households were included, as well as for the views of perceived "at risk" groups to be heard, the following household composition and number of interviews was decided on.

Segments	
Maori	n=3
Pacific Island	n=3
English as a second language/literacy issues	n=3
Low income/low socio economic level	n=3
Elderly	n=3
General population (groups other than above)	n=6

In addition, the sample was distributed around New Zealand including metropolitan, provincial and urban locations.

Respondents were randomly recruited from our Panel of Households according to the required criteria. This Panel is a database of research volunteers, representing a cross section of New Zealanders, who participate in a limited number of projects before being removed from the panel.

Each interview session/discussion lasted one to two hours and was moderated by a senior qualitative researcher who is skilled in the ability to establish rapport with participants and the use of projective techniques designed to gain an understanding of the issues at a more emotive level.

With the respondent's permission, each interview/discussion was tape recorded to aid in content analysis.

A discussion guide was developed to ensure the information topics as outlined previously were covered. A copy of this is appended to this report.

Quantitative Stage

A telephone survey of n=750 New Zealanders aged 13 years plus was conducted.

The questionnaire was structured, and based on the key findings from the qualitative interviews. As the interview duration was expected to be no more than 15 minutes, telephone was the most cost effective survey method.

The maximum margin of error on a sample of n=750 is $\pm 3.6\%$ although the differences will be greater on sub samples of interest (e.g. low income or ethnic households, the elderly).

Respondents were randomly selected from computer generated telephone numbers in proportion to the geographic distribution of the New Zealand population.

At the analysis stage, the sample was post weighted to reflect the actual population on the basis of age, gender and ethnicity.

Interviewing was conducted by CM Research's own team of experienced interviewers.

Interviewing was carried out using our CATI (Computer Assisted Telephone Interviewing) facility located in our Auckland office. Respondents' answers to questions were entered directly into the computer thereby speeding up the data collection process. Built in logic checks to the system, and on-line supervision, helped avoid interviewer error and the collection of erroneous information.

Other quality control procedures adhered to are as follows:

- Internal peer review of questionnaire and recruitment screener
- Briefing notes prepared for interviewers by the Project Leader
- Initial pilot of questionnaire (n=20 interviews)
- Ten percent audit of all interviews
- Multiple call backs to non contacts to preserve the random nature of the interviewing
- Logic checks on data prior to analysing findings

Sample Profile

	%
Gender	
Male	49
Female	51
Age	
13-24 years	21
25-34 years	19
35-44 years	19
45-54 years	15
55-64 years	10
65 years plus	15
Ethnicity	
New Zealand European	75
Maori	15
Pacific Islander	5
Other	5
Household Structure	
Young single living alone	3
Group flatting together	7
Young couple, no children	6
Family with mainly pre-schoolers	11
Family with mainly school aged children	25
Family with mainly adult aged children	19
Older couple/person, no children	28

Sample Profile cont...

	%
Household Income Per Annum	
Less than \$10,000	4
\$10,000 - \$19,999	10
\$20,000 - \$29,999	10
\$30,000 - \$39,999	9
\$40,000 - \$49,999	10
\$50,000 - \$60,000	12
\$75,000 - \$99,999	8
\$100,000 plus	8
Refused/Don't know	30
English as a first or second language	
Main	92
Second	9
Employment status of respondent	
Full time	45
Part time	14
Not employed	41
Gender of main income earner	
Male	70
Female	30
Socio-index of high income earner	
High	7
2	16
3	26
4	16
5	13
Low	5
Housewife	7
Unemployed/retired/student	6
Refused	5
Number of smokers in the household	
None	64
One	20
Two	12
Three or more	4

Sample Profile cont...

	%
Percent of smokers who smoke inside	
Yes	62
No	38
Number of people in the household	
One	14
Two	31
Three	17
Four	21
Five	11
Six or more	6
Number of children in the household	
None	19
One	26
Two	32
Three	18
Four or more	5
Urban or Rural	
City	44
Town	35
Rural	21
Fire Area	
Auckland	37
Northland	12
Bay – Waikato	13
Eastern	5
Western	7
Arapawa	16
Transalpine	13
Southern	6
Own the home	
Yes	72
Rent	24
Other	4
Base: 750	

Sample Profile cont...

	%
Material of the house	
Wood	61
Brick/concrete	30
Other	9
Don't know	1
Number of storeys	
One	70
Two	25
Three plus	6
How old is the house	
Less than five years	9
6 - 10 years	8
11 - 20 years	18
21 - 30 years	16
31 - 40 years	11
40 plus	28
Don't know	11
Has your house been rewired	
Yes	35
No	47
Don't know	18
Garage	
No garage	18
Garage part of the house	39
Garage a separate structure	44
Flammable material stored	
Yes	61
No	38
Don't know	1
Base: 750	

3.0 Executive Summary

3.0 Executive Summary

3.1 Summary

This summary combines the key findings of the survey and qualitative study. It includes our conclusions and recommendations to the Fire Service on the basis of the research findings.

Smoke Alarms

Eighty percent of households in this survey claimed to have a smoke alarm. While this suggests significant uptake of smoke alarms, the following groups remain likely to have *no* smoke alarms:

- Renters 34%
- Smokers 26%
- Under 34s 26%
- Aucklanders 28%

The qualitative research shows that while many people think having a smoke alarm is a good idea, they need to be *prompted* into action. People also need reminding that having a smoke alarm does not obviate the need to take other fire safety precautions, such as having a rehearsed escape plan.

Non Europeans and migrants are less likely to believe that having smoke alarms is a good idea and therefore need particular messages targeted at them.

Other Fire Safety Equipment

In the survey 41 percent of respondents said that their household has a fire extinguisher or fire blanket. Those groups most likely to have *neither* a fire extinguisher nor a fire blanket are:

- Town/city dwellers 62%
- Renters 72%
- Pacific Islanders 76%

The qualitative research shows cost is a barrier to buying a fire extinguisher. It also reveals that fire extinguishers are associated with saving *property* rather than lives, which may explain their absence among renters, ie why pay to save someone else's property?

Even where a household *does* have fire safety equipment, it doesn't necessarily follow that all household members know how to *use* it. Underlying this is a perceived lack of necessity to learn how to use the equipment ('it won't happen to me') and an assumption that in the case of fire *someone else* will be there to use it.

The *accessibility* of fire safety equipment is also an issue, with some households in this study keeping their fire extinguisher under the house or in the garage.

Escape Plans

The survey shows that 57 percent of households have an escape plan. However, fewer than half of *these* households have actually *practised* their escape plan.

Few households in the qualitative study had formalised, up to date escape plans (ie discussed, planned and *practised*).

Where households do have an escape plan, the driver is often the presence of school age children who have been set this task for 'homework'. Other drivers for working out an escape plan include having someone with a disability in the household, and having direct experience of the consequences of *not* having an escape plan (ie knowing someone who has died or come close to dying in a fire).

A number of households in the qualitative study had an unpractised escape plan. The barriers to putting their plan into practice include the belief that 'it won't happen', a perceived lack of urgency (ie not 'getting around to it'), and the belief that knowing what to do in a fire is a matter of 'common-sense'.

No migrant households in the qualitative study had an escape plan. They believed that in the event of a fire the Fire Service would come to their rescue.

Fire Safety Behaviour

The most common *unsafe* practices people admitted to doing *sometimes* or *often* were:

- Leaving a pot on the stove when out of the room (48%);
- Having multiple plugs in a power socket with no overload cut-off switch (26%);
- Drying clothes close to/on a heater (20%);
- Leaving lighters/matches in reach of children (15%).

The at risk groups, ie those groups most likely to say they do unsafe things, were:

- Maori
- Pacific Island people
- Renters
- Under 34 year olds
- Smokers
- Low income households

The qualitative research found that the ‘it won’t happen to me’ mentality is pervasive when it comes to explaining these behaviours. People offered the following reasons for their unsafe behaviour:

- Human nature/forgetfulness/complacency, eg leaving things on an element while it is going;
- Casual housekeeping, eg not wiping up spills on the stove top;
- Alcohol, eg cooking while under the influence
- Not supervising children, eg while cooking, around fires and heaters;
- Cost, eg the cost of a fire guard, the cost of fire safety equipment, the cost of using a drier rather than putting clothes in front of a heater, the cost of getting wiring checked and replaced;
- Lack of knowledge, eg when to check wiring, what to look for in the way of labelling to identify inflammable garments;
- Lack of awareness of the causes of fires, eg that they can start through old wiring not being replaced.

The qualitative research also found that sheds, garages and workshops may pose a significant fire risk. This is due to a combustible combination of: oil, petrol and other flammable liquids lying around, dirty rags and rubbish on the floor, people smoking while they work on cars and sparks coming from welding equipment

Underlying such risky scenarios are macho attitudes toward taking precautions (ie it is not cool) and the belief that such fires will not be life threatening and therefore are to be taken less seriously.

Attitudes to Fire Safety

While many people in the survey considered themselves to be fire safety conscious, 68 percent feel they could be *more* fire safety conscious than at present. The qualitative research found that many people felt they were sometimes careless, forgetful or complacent about the possibility of fire.

Forty three percent of people in the survey believe that taking risks with fire is part of human nature. The qualitative research shows that complacency and the belief that ‘it won’t happen to me’ lie behind this attitude.

The survey also found that males are more likely to be risk takers, which was illustrated in the qualitative study (mentioned above).

More than a quarter of people believe that most causes of serious household fires are beyond householders' control. This perceived lack of control, or helplessness in relation to fire, was also evident in the qualitative study, and was particularly strong among Migrant households.

The following beliefs all pose barriers to people taking fire safety precautions and *acting* on their good *intentions*.

- Most causes of fire are beyond the householder's control
- Taking risks with fire is part of human nature
- A serious fire is not likely to happen to our household.
- The Fire Service will arrive in time to save our lives

The Relationship Between Attitudes and Risk

The survey population was segmented on the basis of their attitudes to fire safety and prevention. We have called the most at risk groups (in terms of poor attitudes and behaviour regarding fire safety) '*Abdicators*' and '*The Gamblers*'.

'*Abdicators*' believe that they are doing everything possible to prevent the risk of fire, despite actually taking few precautionary measures. They do not believe that a serious fire will happen to them, and are confident that the Fire Service would save them should a serious fire break out. In essence, they are *abdicating* responsibility for fire safety, by refusing to accept that a fire *can* happen to them and that they can and should take steps to prevent this. Over represented among '*Abdicators*' are:

- Households with school age children
- Pacific Island people and people with English as a second language
- Lower socio economic groups

'*The Gamblers*' are *not* fire safety conscious and it shows in their behaviour. They lack most forms of fire safety equipment and take numerous risks with fire around their homes. They know they could be more safety conscious and accept that preventing fires is within their control, but they don't do anything about it. They accept the consequences of their actions however - they don't believe the Fire Service would arrive in time to save their lives. In essence, risky behaviour is a *gamble* they are prepared to take. Over represented among '*The Gamblers*' are:

- Renters
- Younger people (under 35)
- Households with no children or pre-school children
- Part time workers
- Medium socio economic groups

Responsibility for Fire Safety

The survey found that people believe that while they are responsible for *preventing* fires, the Fire Service is responsible once a fire *breaks out*.

The qualitative research found that while people believe they *should* take care to prevent fires, the Fire Service represents a *safety net* should they fail in doing so. Reliance on the Fire Service to save people from fires is particularly overt among Asian migrants in this study.

In terms of specific areas of responsibility, when it comes to *preventing fires* just one percent of people believe it is the Fire Service's responsibility, while almost four out of five people believe it is their own responsibility.

When it comes to *making sure people know how to put out fires* one in five people believe it is the Fire Service's responsibility.

And, when it comes to *saving property and lives* just over half (55%) believe that it is the Fire Service's responsibility, while just under half (46%) believe it is their own responsibility.

Homeowners, Europeans, medium and high income households and non smokers are more likely to believe that it is the Fire Service's responsibility to save property and lives in the event of a fire.

Fire Safety Communication

The survey found that the communication channels with the most positive influence are television (advertising and programmes), the media (news stories), schools (educational programmes) and smoke alarm promotions and advertising.

The identified at risk groups are more likely to respond to fire safety messages communicated through:

- television advertising (45 percent of low income households);
- school programmes (45 percent of Maori, 40 percent of renters, 47 percent of younger people);
- smoke alarm promotions/advertising (33 percent of low/medium income households);
- their workplace (38 percent of ethnic minorities, 30 percent of households where English is a second language).

The qualitative research confirms that news stories are a key source of the following types of information:

- how fires start;
- how quickly a fire can take hold;
- that smoke alarms can save lives;
- that fires do happen to ‘people like me’.

Television programmes depicting fires often show people how quickly a fire can take hold and what to do in the event of a fire.

Catchy slogans such as “stop, drop and roll” are an effective means of communicating ‘what to do’ in the event of fire to children and adults alike.

Television advertising also has lasting impact, with people recalling advertisements they saw more than ten years ago. However, people recall little recent television advertising of fire safety messages.

This study found that people are eager for more fire safety information. Their specific information needs are outlined in the recommendations at the end of this summary.

3.2 Conclusions

This study shows that most people accept the idea that it is their responsibility to prevent fires in and around their homes. However, while greater numbers of people are installing smoke alarms, they continue to take risks with fire. Many people appear to regard the Fire Service as a safety net should things go wrong.

A key barrier to people taking greater precautions to prevent fires in their home is their belief that a serious fire 'won't happen to me'.

A further barrier is people's failure to translate their good intentions into action, ie not 'getting around to' replacing the frayed jug cord or buying a fire extinguisher for the kitchen. It has been said, the road to hell is paved with good intentions.

Complacency is also a barrier to people taking fire safety measures such as rehearsing their escape plan or making sure an electric blanket is switched off when the owner is in the bed. In these cases, people shelter behind the belief that common-sense will save them should a fire break out.

The cost (real and perceived) of fire safety equipment poses a barrier to greater uptake of smoke alarms and fire extinguishers. The cost and upheaval of rewiring older homes is another practical barrier to taking action to prevent fires.

Migrants and households in which English is a second language take few of the precautions other households take and tend to display a pronounced sense of helplessness with regard to preventing fires. This is accompanied by the expectation that the Fire Service will save them in the event of fire, and a tendency to focus on the material cost of household fires rather than the potential *human cost*.

The challenge facing the Fire Service is to develop a communications strategy which confronts people's complacency and lack of urgency when it comes to preventing household fires. At the same time, the Fire Service must provide detailed information which meets the needs of the identified at risk groups, as well as the broader population.

To overcome the key barriers to adoption of fire safety behaviours, the 'it won't happen to me' brigade need to believe that serious fires do happen to people like them. The 'well intentioned' need their good behaviour reinforced and to be prompted to take action in those areas where they confess complacency.

3.3 Recommendations

- Communications about fire safety must address the attitudes underpinning much of the risk taking and unsafe behaviour displayed by people in this study. In particular, the communications must combat the following beliefs:
 - Most causes of fire are beyond the householder's control = *inform people of the most common causes of household fires and what they can do to prevent such fires.*
 - Taking risks with fire is part of human nature = *show the costs of fires in human terms.*
 - A serious fire is not likely to happen to our household = *show fire causing scenarios that people identify with.*
 - The Fire Service will arrive in time to save our lives = *inform people of what they can do to prevent fires and what they should do if a fire breaks out.*

- Communications about fire safety must chip away at complacency and the pervasive 'it won't happen to me' attitude by conveying the following core messages:
 - Fire and smoke kill people *quickly*
 - That lives are lost and homes destroyed for want of *a little care*

- News stories and television advertising and programmes are instrumental in communicating fire safety messages and changing attitudes toward fire safety and influence all demographic groups and segments. These media can be used to prompt adoption of fire safe attitudes and behaviour:
 - News stories about fires should include the causes of the fire and whether or not the household had a smoke alarm.
 - Television advertising should portray scenarios people identify with (outlined in this report), eg leaving a pot on the stove for 'just a minute' and getting side tracked, unsupervised children deciding the clothes will dry more quickly if they are nearer to the fire. There is also potential to target male risk takers by showing a serious fire scenario set in a garage/workshop.
 - Television advertising should show the long term damage caused by fire, focusing on the human cost, ie *loss of life.*

- Communications and promotional activities should be designed to prompt people with good intentions to *take action*, ie to 'get around to it', be 'it' installing a smoke alarm, rehearsing their escape plan, getting an electric blanket checked, buying a fire extinguisher... by:
 - Communicating how *easy* it is, eg where to buy a smoke alarm;
 - Communicating how little it *costs* and comparing the cost with something of relative value, eg a price comparison between a smoke alarm and a couple of Lotto tickets.
 - Partnering with business/local authorities to promote special offers and free or discounted installation and checking services, eg for smoke alarms, electric blankets, house wiring etc.

- Communications on fire safety should convey the following messages:
 - That all fires are potentially life threatening.
 - That having a smoke alarm is not enough – all households should have an escape plan.
 - That to be useful an escape plan must be up to date and practised (ie having an unpractised escape is like having a seat belt but not wearing it).
 - That households should take precautions designed to prevent fires regardless of who owns the house – it is the householders' lives on the line.
 - That having fire safety equipment is not enough – all household members should know how to use it.

- In its communications, the Fire Service should provide the following specific information:
 - the most common causes of fires
 - how to put out different types of fires
 - how to call the Fire Service
 - proof that smoke alarms save lives (statistical evidence, if this exists)
 - the best places to position fire alarms
 - how often to check smoke alarms
 - how many smoke alarms are needed
 - early warning signs of electrical problems

- how to know whether to get wiring checked
- how often electric blankets should be tested
- the safest/most fire resistant materials for houses

- The Fire Service should consider the adoption of a catchy slogan(s) to communicate key fire safety messages.

- Ensure that the communication channels used to inform the public reflect those channels to which at risk groups are most likely to respond:
 - TV advertising (low income households)
 - school programmes (Maori, renters, under 35's)
 - smoke alarm promotions/advertising (low and medium income households)
 - the workplace and community groups (ethnic minorities, households where English is a second language)

- Migrants have particular information needs and require targeted communications which address these:
 - reminders of the telephone number for the Fire Service;
 - how the Fire Service 'works', ie what it does, what its responsibility is, who pays for the service;
 - how to make a New Zealand home fire safe, and that doing so is the householder's responsibility rather than the property owner (ie New Zealand doesn't have laws about provision of fire safety equipment in homes);
 - that smoke alarms save lives by waking people and alerting them to the presence of smoke, ie their purpose is not focused on saving property.

4.0

Fire Safety Equipment

4.0 Fire Safety Equipment

4.1 Smoke Alarms

Key Qualitative Findings

- A reasonably high proportion of households in the qualitative study had a smoke alarm.
- Respondents often commented that they *intended* to get a smoke alarm for some time before they actually did so. In one case, a household had got a smoke alarm which sat in its box until the imminent interview for this study prompted them to instal it. This reflects the fact that while people may believe smoke alarms are a good idea, they need to be prompted to take action.

Motivations for Getting a Smoke Alarm

- Respondents who have smoke alarms are motivated by the belief that a smoke alarm will alert the household to a fire before it gets out of control (and kills people, or causes extensive damage).
- The triggers that lead to respondents installing smoke alarms are:
 - The recent publicity campaigns appear to have prompted many people to install smoke alarms.

“I think we all thought of it because of the advertising. And I think it was the fact that it is now encouraged... not something that was an optional extra... more or less compulsory to have it.”

- News stories about other people’s experiences of fire. The closer to home the fire is, eg in your own town, the stronger the motivation to take action. Respondents commented that news stories about fires often end by saying whether or not the household in question had a smoke alarm, and fire fatalities often appear to involve households without smoke alarms.
- Advertising, promotions and displays in local stores, newspapers, or at the local power authority. Free installation is also a contributing factor in prompting purchase.

“There was a display down at South City Mall... they were only ten dollars each and the firemen said that they would come and talk to me about where they should be placed... their display showed how it is normally smoke that overcomes people and causes the fatalities... they had some graphic photographs.”

- Specials prompting awareness of smoke alarms and making the subject ‘top of mind’. Specials also make fire alarms more affordable for households with limited budgets (although many people comment that smoke alarms are not expensive, the one-off cost still makes a sizeable hole in some weekly budgets, and is therefore expenditure which it is easy to delay).
- Purchasing a smoke alarm as part of a home security package. It appears that some lower income households in this study are not aware that a smoke alarm is a relatively cheap stand-alone item, and are being offered very expensive home security systems (eg \$2000 - \$3000) where a smoke alarm is included in the package.
- Being given a smoke alarm by a fire safety conscious friend or family member.

“His sister gave it to us... she had a spare one. She got them from the Housing Corp... I always meant to get one. I mean, they are not dear either, that is the silly thing about it, they are not dear, and you see them and think ‘I must get one of those’, and it is something I never ever did... laziness basically... a bit blasé about it.”

- Friends or family having a smoke alarm installed in their home may prompt other people to follow suit.

“There was a lady that we know got the fire service in, they brought them and she gave them the twenty dollars for the two alarms... while they were there... fitting the fire alarms... the neighbours decided they wanted them – so that was better to me than a lot of advertising.”

Barriers to Getting a Smoke Alarm

- Non European respondents in the qualitative study were less likely to have smoke alarms, and also less likely to believe in principle that smoke alarms were a good idea.
- The barriers to respondents installing smoke alarms are:
 - An “*it won’t happen to me*” mentality. Households which did not have smoke alarms often expressed an implicit belief that fire was unlikely to affect their household, because they were sensible around fire. People who hold this view may believe that smoke alarms are a good idea *in principle*, but simply never get around to installing one.
 - The *perceived* and *actual* cost of smoke alarms. Some households on tight budgets *perceived* that a smoke alarm would be expensive, without knowing the actual cost (they often associated smoke alarms with home security packages, which are being peddled at prices beyond their reach – see earlier). Where respondents are aware of the *actual* cost of a smoke alarm they may never-the-less defer the purchase because an alarm is a low priority item compared to needs such as food, shelter and heating. Implicit in their priorities is the fact that a fire *may never happen* to them, whereas food, shelter, and heating are immediate and ongoing needs.

Migrant Attitudes to Smoke Alarms

- None of the migrant households included in this study had smoke alarms installed. When asked about smoke alarms, their responses were as follows:
 - A Croatian household contained a number of smokers who were concerned that this activity would trigger a smoke alarm, creating a nuisance in that it would be going off all time. For these respondents, denying themselves the pleasure of smoking was too great a sacrifice when weighed up against the possibility of a fire *that may never happen*.
 - A Korean migrant living in rental accommodation commented that his household would install a smoke alarm only if they *owned the property*. This highlights the perception that a smoke alarm is associated with saving property, rather than life. From this respondents’ perspective, there was no benefit to him in protecting property owned by someone else, and installing a smoke alarm was the owner’s responsibility.

- A Chinese migrant expressed similar views, commenting that *any fire prevention* measures are ineffective because fire takes hold so quickly. As with the Korean migrant, the emphasis was on property. This respondent believed that if the family were at home when a fire broke out they would smell smoke early on - therefore not needing an alarm to warn them – and if they were away from home it would not matter if there was a fire as their insurance would replace/repair the house.
- Samoan respondents living in a church owned house felt it was not up to them to install a smoke alarm, but felt it would be impolite to ask their church to pay to install a smoke alarm. Implicit in their response are two key barriers already mentioned: the belief that a fire *will not happen* to their household, and the perception that a smoke alarm would be *costly* (they had been approached by people selling security systems which included a smoke alarm in the package).

“There were some guys who came here and asked – the thing is that it is too expensive for us but we can’t ask the church people, because there is only ten couples in our church. (How much do they cost?) Two thousand dollars... they said they fix the whole thing.”

Other Issues Concerning Smoke Alarms

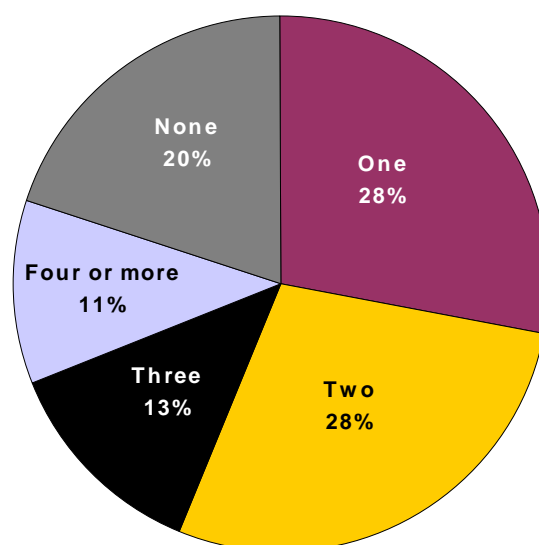
- Respondents in this study raised a number of other issues in relation to installing smoke alarms.
 - While installing a smoke alarm can reduce people’s feelings of vulnerability, it does not obviate the need to have an escape plan. However, few households in this study had a formal practised escape plan.
 - It is important to install smoke alarms in the correct place/s in the house and to have adequate coverage. A number of respondents commented that their household should probably have more smoke alarms than it did, but that having one was better than none. Some households were put off installing further smoke alarms by the cost of doing so. Some also hesitated to install further smoke alarms on the grounds that they were not sure where they should put them.
 - One respondent who had experienced a house fire (which started outside) felt that it might be worthwhile to also install smoke alarms outside/near the house.
 - Smoke alarms are a nuisance when they go off ‘for no good reason’. For this reason, some households fail to instal a smoke alarm in their kitchen, despite recognising that this is a prime fire risk area.

- One respondent commented that repeated ‘false alarms’ with a smoke alarm may cause people to turn off their smoke alarm “*permanently*”, or “*ignore*” it when it does go off by simply turning it off without looking to see what triggered it.
- In one household where a smoke alarm had been installed and had not gone off (over a period of time) the respondent ‘allowed’ the batteries to run flat and didn’t bother to replace them, having been lulled into a false sense of security.

Key Survey Results

- Four in every five households (80%) claim they now have smoke alarms.
- Over half of all households (52%) have **more than one** smoke alarm.
- People with children are significantly more likely to have three or more smoke alarms in their households.
- Those more likely to have **no** smoke alarms are:
 - renters 34%
 - smokers in the household 26%
 - 13-34 year olds 26%
 - Auckland residents 28%

Number of Smoke Alarms in the House



Base: 750

4.2 Frequency of Checking Smoke Alarms

Key Qualitative Findings

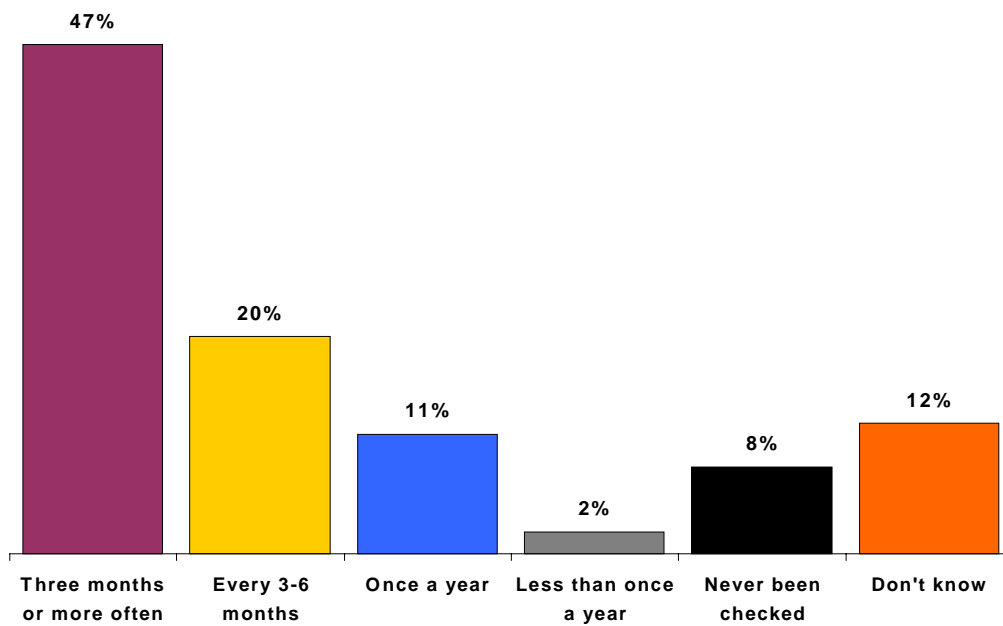
- Testing smoke alarms can be a *random* or *organised* event. Most households in this study appear to check their smoke alarm randomly, ie when it occurs to them.
 - If the respondent hasn't heard the alarm for a while they may check to see if it is still working = *random checking*.
 - Some households make a point of checking their smoke alarm every six months, e.g. linking the test to the beginning or end of daylight saving = *organised checking*.
- Smoke alarm testing can be *casual* or *formal*.
 - Testing the smoke alarm may simply involve wafting a cigarette lighter underneath the alarm or allowing the children to do so = *casual* checking.
 - Testing may take the form of pressing the reset button = *formal* checking.
 - Testing may be done when new batteries are installed in the smoke alarm = *casual* or *formal* checking (depending on whether changing the batteries is a *random* or *organised* event).
- Installing a smoke alarm reduces a household's perceived vulnerability to fire. This in itself can lull respondents into a sense of false security whereby they "*forget*" the need to test the alarm.

"The only way to learn about fire safety is through advertising to remind you to make sure that you have got smoke alarms and it is going properly and it has a battery in it and to check it. You just don't think of it otherwise. People just stick them on the ceiling for years and years and you don't even think about it. If it never goes off you don't worry about it."

Key Survey Results

- Almost half of households with smoke alarms (47%) claim they check their smoke alarms every three months or more often. A further 20% say they check them every 3 – 6 months.
- People more likely to claim they check smoke alarms at least every three months are:
 - males 54%
 - lower socio index respondents 59%
 - 13-24 year olds 54%
- People who rent are more likely to have **never** checked their smoke alarms (12%).

Frequency of Checking Smoke Alarms



Base: 599

4.3 Other Fire Safety Equipment

Key Qualitative Findings

- The qualitative research found that many households in this study did not have fire extinguishers, despite respondents believing that having one in the home was a good idea.

“I have never actually got around to looking at how much they cost – it is not something that has been high on my list of priorities.”

- Barriers to having a fire extinguisher include:

- The cost of purchasing it and refilling it in the event that it is used.

“I suppose the expense again too. You have your money worked out, and we haven’t got a lot of it. You might just work week to week or pay day to pay day and have everything worked out. Sometimes we have extra money and something will come up... it [a fire extinguisher] is not first and foremost.”

- The perceived hassle of maintaining a fire extinguisher, eg testing and refilling it.
- Recognising it would be a good idea to have one but not “getting around to” buying one.
- The belief that you can extinguish fires by other means, eg with wet towels, baking soda etc.
- Associating fire extinguishers with saving *property* rather than *lives*. The following quote is from a young man who lost his house to a fire while the family was out.

“A fire extinguisher is not about saving lives, they are about saving property – it is only lives that I give a damn about saving.”

- As with smoke alarms, having other fire safety equipment such as a fire extinguisher in the house can lull people into a false sense of security.

- Owning fire safety equipment does not necessarily translate into understanding *how to use* this equipment. There were several examples in this study of households which have fire safety equipment but household members do not know how to use it. In these cases, respondents felt protected by having the equipment, but had not considered the need for all household members to know how to use it.
 - One Pacific Islands family had a fire blanket in their kitchen cupboard, but the grandmother (who was the main caregiver for a pre-school child) did not know what it was or how to use it.
 - In a couple of households with fire extinguishers, female occupants were not sure how to use the extinguisher and commented that they would leave it to their male partner.
- In these cases, there was little evidence that these respondents intended to learn how to use the fire safety equipment in their home. Again, people seemed to have an “*it won’t happen to me*” mentality towards the likelihood of a house fire.
- Some households in this study have purchased fire safety equipment, e.g. a smoke alarm, a fire blanket or fire extinguisher, as part of a security package (costing \$2000-\$3000 in total). These households tended to be low income, and respondents were often unclear as to the cost of the individual components of their package.
- Where households *do* have fire safety equipment, it may not be accessible. In one household, the fire extinguisher was stored in a garage separate from the house. In another case it had been stored under the house.

Key Survey Results

- 41% of households have either a fire extinguisher or fire blanket. Of these, a fire extinguisher is the main type of safety equipment.
- The following groups are significantly more likely to have a fire extinguisher:
 - Rural households 54%
 - NZ Europeans 44%
 - Home owners 46%
- Groups significantly more likely to have **neither** are:
 - Town/city dwellers 62%
 - Renters 72%
 - Pacific Islanders 76%

Incidence of Other Fire Safety Equipment

	%
Fire extinguisher	41
Fire blanket	7
Neither	59
Base: 750	

4.3 Ability to Use Equipment

Key Qualitative Findings

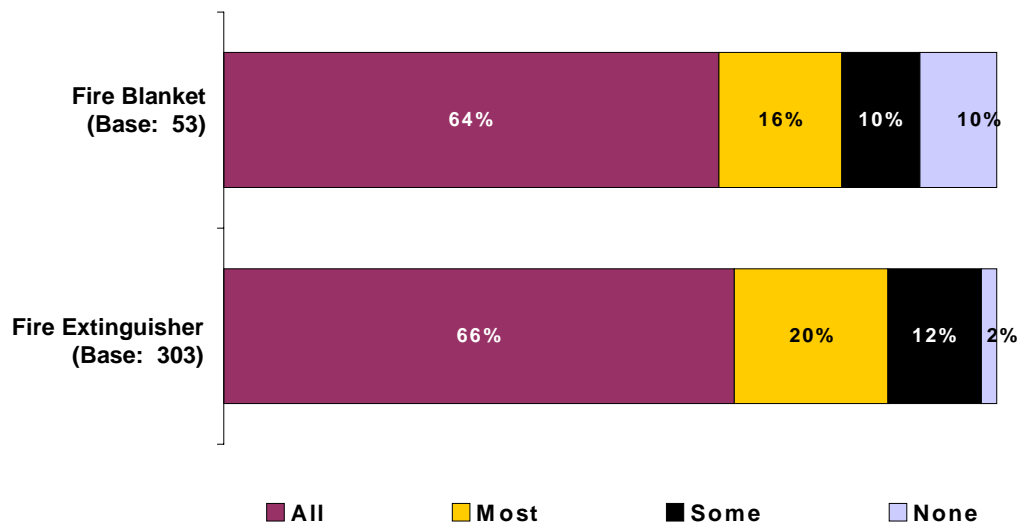
- As discussed already, the fact that a household has fire safety equipment does not necessarily mean that the household members know how to *use* it or are *confident* they would be able to do so.
- In a number of households which had fire safety equipment, some household members were not sure how to use the equipment. In some cases, in the event of a fire, respondents felt they were more likely to flee the house rather than attempt to come to grips with the fire safety equipment.

“I haven’t actually read the instructions [for the fire extinguisher] and it is something that I walk past when I am doing something else and think ‘I must read those instructions’... (What stops you?) Just getting round to it. I mean it is an important issue - it is not as important as what I happened to be doing at that moment... if Anthony was here I would think he could do it because you know how to use the fire extinguisher and [I’d be off] ‘see you later’...”

Key Survey Results

- About two thirds of households with fire safety equipment consider that **all** household members know how to use it. Lack of knowledge is perceived to be slightly higher for fire blankets (10% said none of the household members know how to use it).

How Many People in the Household Can Use the Fire Safety Equipment?



5.0 Household Emergency Escape Plans

5.0 Household Emergency Escape Plans

5.1 Household Escape Plans

Key Qualitative Findings

- Most households in this study did not have a *formalised* (ie discussed, planned and practised) escape plan known to all household members.

Motivations for having an Escape Plan

- For those households who *do* have a formalised escape plan, the key drivers for developing the escape plan were:
 - Primary school age children putting pressure on their parent/s after learning about the necessity of having a household escape plan at school. When this happens, parents tend to feel that they need to take the plan seriously because it is ‘homework’, and in doing so they are setting a good example for their child (being a good parent).
 - Special circumstances, e.g. the sole parent of a handicapped child in a wheelchair had recognised the need for an escape plan due to their extra vulnerability in the case of a fire.
 - Knowing someone who has had a fire and didn’t have an escape plan in place.

“There was a lady in our parent centre group who had a fire at her place and they didn’t have an escape route from their upstairs area... I think it brought it home to us that you definitely need to have some sort of plan.”

- Some households have gone as far as discussing and planning an escape plan, but have not practised it. Typically in these cases, respondents have discussed how each household member would exit their bedroom (assuming fire breaks out at night) but the plan has not been *practised*.
 - One household with four school age children had been prompted to discuss an escape plan by a neighbourhood fire. However, the plan had not been practised, and no meeting place had been designated.

“We were going to do it, ages ago, but never got around to it. I think we planned the escape plan one night... but we don’t practise it... I think the fact that this house is set low to the ground... probably that is why we haven’t got around to it.”

- One household with a sole parent and four children did have an escape plan but in discussing it during the interview they realised that individual household members' responsibilities were not clearly defined now that a new baby was in the household. This highlights the need for households to update their escape plans when household circumstances change.

Barriers to having an Escape Plan

- Where households have no escape plan, there was no evidence that respondents were committed to developing one. Underlying this is the *'it can't happen to me'* mentality already mentioned in this report.
- Some respondents commented that very *"efficient"* people would have escape plans, and only *"paranoid"* people would actually practise them, implying that their lives were simply too busy to plan for something that may never happen.

"I know that you should have set plans and have practise ones, and a co-ordinator and a meeting place but... I don't know – it is something you don't really think about, it crosses your mind and you think 'oh, it might not ever happen', and you don't want to think about it."

- Some households rationalise the lack of an escape plan by pointing out that their house is single storey and household members could simply *"jump out their bedroom window"* in the case of a fire.
- In the absence of escape plans some respondents reasoned that if a fire broke out they would do the logical thing. In other words, an escape plan was not necessary if you were someone who could think on your feet.

"..... the logical thing would be to break the window. In this situation you can sort out how to save yourself".

- None of the migrant households included in this study had escape plans.
 - One Chinese migrant believed that the fire brigade would arrive shortly after the outbreak of fire and that firemen would save the people in the household if they hadn't already escaped. This indicates a reliance on the Fire Service, and a lack of perceived responsibility for one's own safety.

- Even where households *have* discussed and worked out escape plans, there are a number of barriers to putting these plans into practice:
 - The sheer inconvenience and hassle of doing so, especially when there are lots of household members to get together, or young children in the household who need managing.
 - That it is too cold in winter and therefore unpleasant (NB the interviewing for this study took place mid-winter).
 - The belief that there is no need to practise an escape plan if household members are aware of what to do *in theory*.
 - The belief that the house design provides ample escape routes (eg lots of outside doors, a one storey house) and therefore there is no need to practise.

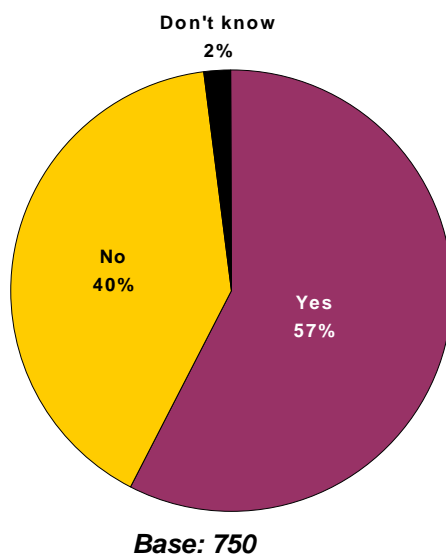
- If respondents have experienced apathy toward ‘practice’ fire alarms in public places, this can reinforce the belief that practising escape plans is not something that needs to be taken seriously.

“I happened to be in the supermarket at Browns Bay when the fire alarms went off but they told us it was just a practice but everyone could get out so they could see how long it takes, but because they said it was a practice people couldn’t care less”.

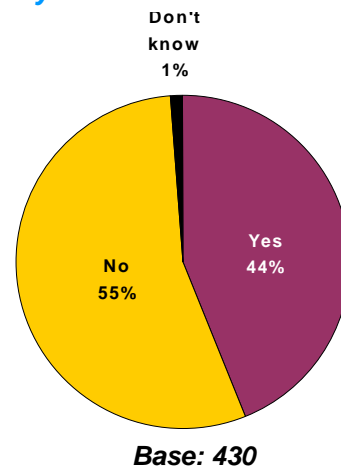
Key Survey Results

- Over half of households (57%) claim they have an escape plan prepared, but less than half of these (44%) claim to have practised it.
- People more likely to say 'yes', their household has an escape plan, are:
 - Females 62%
 - New Zealand Europeans 60%
 - Homeowners 61%
 - People aged over 35 years 66%
 - Non smokers 61%
- Maori are more likely than other groups to say they have also **practised** their escape plan (62%).

Does Your House Have an Escape Plan?



Has Everyone Practised This Plan?



6.0

Fire Safety Behaviour

6.0 Fire Safety Behaviour

6.1 Actual Reported Household Fire Safety: Risky Behaviour

Key Qualitative Findings

The following 'unsafe' behaviours were reported by respondents in this study. These behaviours have been grouped according to the specific aspect of fire safety they are concerned with, eg stoves, smoking etc.

Ovens and stove tops

- A number of respondents reported stove top fires of varying degrees of seriousness. The main causes of stove top fires appeared to be spilt fat and objects placed on elements by mistake.
- Respondents often leave things cooking on the stove when they are not in the room (or paying close attention) for short periods of time. They comment that it is not always practical to stay in a room when things are cooking on the stove.
- Few respondents admitted to leaving things cooking in the oven when they leave the house, although some did confess to forgetting that something is cooking on the stove top and leaving the kitchen, eg to work in the garden.
- A commonly reported cause of stove fires was people putting things on the stove, e.g. a pan of oil and then leaving the room and forgetting the pan.
- Casual or sloppy housekeeping practices can also cause stove fires, ie when previous spills catch on fire.
- Another common cause of stove fires was people placing things on elements and then switching on 'the wrong element'. Examples of fires or near misses caused this way included burnt newspapers, a crock pot and an oven mitt.
- A number of respondents reported stove fires from teatowels catching alight. Some people simply put the teatowel down on an element without realising it was on, while others purposely spread teatowels over the stove top as a quick way of drying the teatowel, ie with the residual heat from the elements.
- Cooking while drunk is another reported cause of stove fires. Falling asleep while cooking under the influence of alcohol resulted in a major house fire for one household in this study.
- Children cooking unsupervised, e.g. while at home alone after school, is also a cause of stove fires in this study.

Open fires, closed-in fires and wood burners etc.

- One household in this study had an open fire which was not protected by a spark guard. In this case, lack of money was given as a reason for not having a spark guard.
- Another household had a closed-in fire which had a broken panel in the door. In this case, they had not considered the need to replace it, and when prompted saw this as the responsibility of the owners of the house. As it was a church house, the family felt it would be awkward to ask for repairs.
- Some households with closed-in fires leave the doors open when the fire is going because it is warmer that way.
- Some households were aware of the need to have their chimney swept and did so on a yearly basis. However, some households in this study did not have their chimney swept, saying they could not afford to do so.
- A number of households with closed-in fires and wood burners also kept a fire guard around them to ensure that children did not get too close. In these cases, clothes may be placed on the fire guard, particularly where the family does not have a dryer or heating bills are a concern.

Heaters

- In some households, clothes are dried on top of oil filled heaters and children may 'overload' the heater with clothing. In one case, the respondent commented that it was too much effort to tell the children off or change their behaviour, the implication being there are more important things to worry about.
- A number of households in this study leave heaters on when they are away from home, or when no one is in the room.
 - Respondents commented that it was safe to do so with oil filled heaters which are thermostatically controlled and have a sensor to cut out if a short occurs.
 - Some respondents felt it was safe to leave bar heaters on in an empty room provided they were not near any clothing or soft furnishings. In one case, a teenager was habitually leaving a bar heater on in her empty bedroom unbeknownst to her safety conscious parents.
- Inadequate supervision of small children around heaters is another common unsafe behaviour identified in this study. A common example was for a child who has just been bathed to dry themselves in front of the heater while the parent is busy elsewhere. In these cases respondents reported small children sitting close to a bar heater (in flammable nightwear) and putting towels over a bar heater to dry.

Smoking

- A number of the households with smokers confined their smoking to outdoors, primarily for health reasons rather than fire safety.
- Some smokers with young children were in the habit of leaving their lighters around the house for convenience. A number of smokers believed that their young children “knew” not to play with lighters, and therefore the lighter did not need to be kept out of reach.
- Some respondents were still using non child-proof lighters, and were not planning to replace them until they were used up.
- Some smoking households were in the habit of throwing cigarette butts/ash into the rubbish bin to be “tidy”. While some respondents report dampening down their ashtrays before discarding the contents, others were not in the habit of doing so.
- One respondent in this study reported that her husband smokes in bed and was fairly casual with disposal of his butts. However, she believed that the fact he smoked “rollies” made this practice less risky.

“They go out fairly fast, whereas tailor made ones take longer”.

Electrical wiring, switches and plugs

- Many households considered faulty wiring to be a major cause of household fires. This impression tended to come from recalled news stories. Respondents considered electrical fires to be something beyond their control, and not something they could do anything to prevent.
- Some households were aware that their ageing house might place them at risk of an electrical fire. However, the perceived cost of rewiring is a barrier to having wiring checked and redone in older homes.

“Wiring too... if we know that the house is getting on we should have that looked into... (what stops you?) the expense... (anything else?) Easiness – can’t be bothered. It won’t happen to us – we are too careful.”

- A number of households in this study used power boards with cut out switches to alleviate a shortage of power points in the house. However, some households were overloading power points.
- Some households habitually switch off appliances at the wall when they are not in use, believing that they are a fire risk. However, doing so can be inconvenient, or result in electric clocks on ovens and video recorders etc. not working. Other households have never considered the need to do so.
- Some households also reported occasional forgetfulness and lack of vigilance in turning off electrical appliances when they are no longer in use. Irons can pose a particular fire risk if someone is interrupted mid-chore.

Electric Blankets

- Most respondents are aware of the need to check electric blankets for faulty wiring, but do not know how often this should be done.
- Some respondents don't get their electric blankets checked because they are only a couple of years old and therefore "*not old enough*" to warrant it (this was said of electric blankets up to six years old).
- Other respondents commented that although they *intend* to get their electric blankets checked they never actually get around to doing so. There is a hassle factor involved in taking electric blankets off the bed in order to get them checked.
- Some respondents have been prompted to get their electric blanket checked by the local power authority advertising a free checking service.
- Most respondents are aware that electric blankets need to be held smoothly and firmly on the bed.
- Some respondents commented on the need to avoid creating "*hot spots*" by leaving clothes lying on the bed, or allowing pets to sleep on it. However, respondents indicated that in reality it was hard to prevent either of these things from happening.
- A number of respondents (particularly women) commented that although they know they should not have the electric blanket on while they are in the bed, they sometimes do so when they are particularly cold or when the bed has not had time to heat up before they get into it. In these cases, the desire for warmth over-rides their desire to be safe. This is also true of respondents who leave their electric blanket on when they go out at night to pre-warm the bed.
- Some respondents also admit to falling asleep with their electric blanket still on. Although they know this is a no-no, one respondent commented she was sure that she would wake straight away if the blanket caught on fire.

- Some households in this study avoid electric blankets altogether, but this seems to be more for reasons of economy or personal preference, than out of consideration for fire safety.

Nightwear

- Many respondents are aware of the need for inflammable nightwear for children. However, one Pacific Island family in this study was not aware of this issue. Another respondent has misunderstood the labelling on nightwear and has been making a point of buying the pyjamas with red labels because she thought this meant the material was fire safe (in fact, the red label indicates that a garment is made of flammable fabric).

Sheds, garages and workshops

- A number of households in this study reported unsafe behaviour taking place in garages, sheds and workshops.
 - This was the ‘province’ of male household members and often involved work being done on cars or other machinery using welding equipment etc.
 - In these cases, flammable liquids were not always stored carefully, and rubbish, newspapers and dirty rags may be lying around the work space.

“We managed to have a small white spirits fire out in the garage painting a car, one of my friends knocked over the white spirits we were using... and there was a cigarette butt on the floor that was still smouldering, and he ran straight out and grabbed a bucket of water... and I said ‘No!’ but it was too late – so it went from a little puddle of fire to like a big puddle of fire.”

- These respondents reported a number of near misses and mishaps with fire, sometimes to the horror of the more fire safety conscious members of the household. This quote illustrates the lack of seriousness attributed to these fires, particularly by young males.

“I was staying at my friend’s place... they play with their cars... some of the cars wouldn’t start and they poured petrol down the carburettor... there was oil everywhere... they have got around five to seven cars in there in bits and when flaming things reach the ground and there is something flammable on the ground... they had all sorts of fun.”

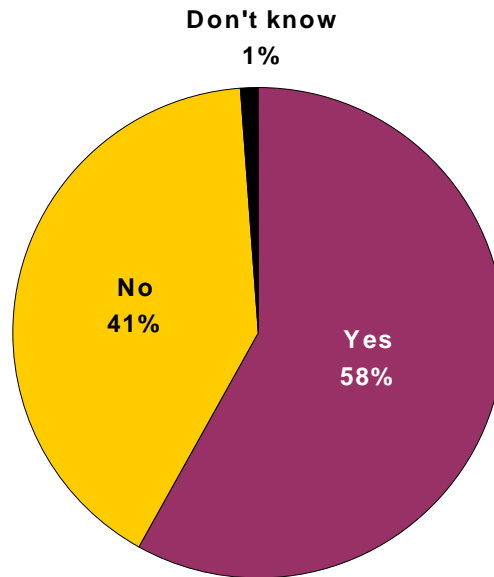
Key Survey Results

- Leaving a pot on a hot stove when out of the room, and having multiple plugs in a power socket without an overload cut-off switch are the **most common** 'unsafe' practices undertaken.
- Drying clothes close to or on a heater and leaving lighters or matches within the reach of children are also practices undertaken by a reasonable number of households (almost 20% of households).

	Never %	Seldom %	Some- times %	Often %	Don't know %	N/A %
Leaving a pot on a hot stove when out of the room	32	22	33	13	-	1
Having multiple plugs in a power socket without an overload cut-off switch	60	9	15	11	4	2
Drying clothes close to or on a heater	73	8	12	5	-	1
Leaving lighters or matches in reach of children	73	6	10	5	-	7
Leaving an electric bar heater unattended in the room	73	8	8	4	-	7
Leaving candles burning when no one is in the room	80	9	8	1	-	2
Leaving spilled fat on the stove or in the oven	82	9	7	1	-	1
Keep using electrical appliances with a frayed power cord	84	7	6	2	-	1
Drying clothes close to an open fire	86	3	4	3	-	4
Working on a motor vehicle where sparks may come into contact with flammable material	85	7	4	2	-	2
Smoking in bed	87	1	5	4	-	3
Base: 750						

- Almost six in ten New Zealand households (58%) have an electric blanket.

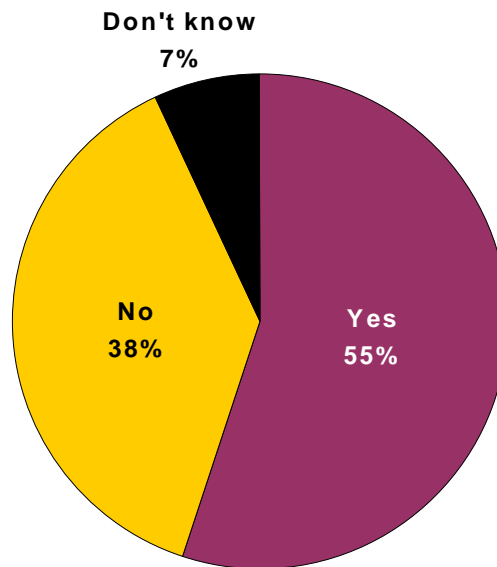
Have an Electric Blanket?



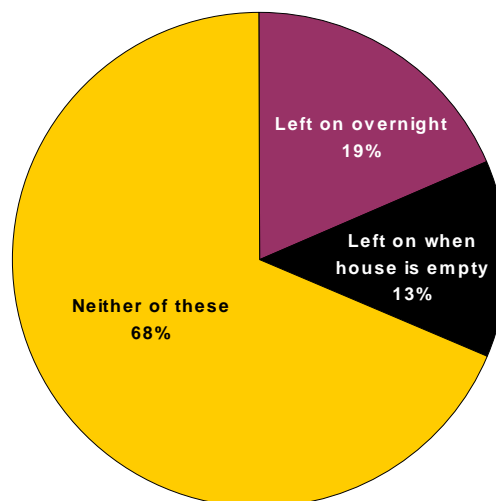
Base: 750

- Over a third of households (38%) do **not** check their electric blankets on a regular basis.

- These are more likely to be Maori people (57%) and younger people aged less than 34 years (53%).



- Electric blankets are more likely to be left on overnight than left on when the house is empty.



6.2 Behaviour Analysed By ‘At Risk’ Group

Key Findings

- The findings reinforce what are already perceived to be the ‘at risk’ groups. The demographic groups more likely to practise ‘unsafe’ behaviour across a range of activities are:
 - Maori
 - Pacific Islands people
 - Renters
 - Younger people (typically aged less than 34 years)
 - Smokers
 - Lower socio-economic households
- At times, other ethnic groups, or those with English as a second language, also have a greater tendency to exhibit ‘unsafe’ behaviour.

Behaviour	‘At Risk’ groups – more likely to practise this behaviour (sometimes/often)
Leaving candles burning when no one is in the room	<ul style="list-style-type: none"> ▪ Maori (20%) ▪ Pacific Islanders (21%) ▪ Renters (15%) ▪ Wooden house construction (12%) ▪ Under 34 years old (16%) ▪ Smokers (15%)
Smoking in bed	<ul style="list-style-type: none"> ▪ Renters (18%) ▪ Under 34 years old (15%) ▪ Maori (24%) ▪ Pacific Islanders (19%) ▪ Low socio-economic (13%)
Drying clothes close to or on a heater	<ul style="list-style-type: none"> ▪ Maori (23%) ▪ Households with children (20%) ▪ Smokers (20%) ▪ Low socio-economic (22%)
Drying clothes close to an open fire	<ul style="list-style-type: none"> ▪ Western fire region (15%)

<p>Leaving a pot on a hot stove when out of the room</p>	<ul style="list-style-type: none"> ▪ Maori (54%) ▪ Households with children (54%) ▪ Renters (49%) ▪ Young people (55%)
<p>Leaving spilled fat on the stove or in the oven</p>	<ul style="list-style-type: none"> ▪ Low socio-economic (12%) ▪ Young people (14%) ▪ Western fire region (19%)
<p>Leaving lighters or matches in reach of children</p>	<ul style="list-style-type: none"> ▪ Maori (35%) ▪ Other ethnic groups (22%) ▪ Low socio-economic (24%) ▪ Households with children (21%) ▪ Wooden house construction (18%) ▪ Younger people (24%) ▪ Bay Waikato fire region (25%) ▪ English as second language (23%) ▪ Smokers (29%)
<p>Leaving an electric bar heater unattended in a room</p>	<ul style="list-style-type: none"> ▪ Pacific Islanders (19%) ▪ Young people (17%)
<p>Working on a motor vehicle where sparks may come into contact with flammable material</p>	<ul style="list-style-type: none"> ▪ Males (10%) ▪ Maori (19%) ▪ Low socio-economic (11%) ▪ Younger people (10%) ▪ Smokers (9%)
<p>Having multiple plugs in a power socket without an overload cut-off switch</p>	<ul style="list-style-type: none"> ▪ Males (31%) ▪ Maori (31%) ▪ Pacific Islanders (35%) ▪ Younger people (31%)
<p>Keep using electrical appliances with a frayed power cord</p>	<ul style="list-style-type: none"> ▪ Maori (18%) ▪ English as second language (14%)

7.0

Attitudes To Fire Safety

7.0 Attitudes To Fire Safety

Key Qualitative Findings

Responsibility for Fire Safety

- This study reveals an *'it won't happen to me'* mentality in relation to the perceived risk of fire. This mentality underlies much of the unsafe behaviour reported in this study, whereby people do things they *'know they shouldn't'* or put off the adoption of safe behaviour, such as purchasing fire safety equipment or practising an escape plan.
- Most households in this study believe that it is their responsibility to try and do things round their home to *prevent* fires. However, should a fire break out in their home, the responsibility for *action* then shifts to the Fire Service. At the back of many respondents' minds appears to be the belief that the Fire Service represents a safety net should a fire take hold.
 - This attitude is particularly overt among Asian migrants in this study.
 - The exception to this way of thinking is among people who live in remote rural areas, or where there is very limited water supply.
- A number of respondents believed that the people most in need of fire safety education were the elderly and children. While this belief may be sincerely held, the researchers note it is also convenient to believe that the problem and locus of responsibility lies elsewhere.
- Respondents commented that parents and schools should both take responsibility for educating children about fire safety.
 - A number of parents of younger children in this study considered that schools did in fact do a very good job of educating their children about fire safety.

"I don't think it is fair to lump it all on the Fire Service because they have got other jobs to do as well. It is our responsibility to teach our children the do's and don'ts of everything and the Fire Service is just to back us up, and they [children] get back-up through the school for that as well and the pre-school".

- Some parents commented that their own attitudes and behaviour had changed as a result of their child coming home from school with fire safety information.

Migrants' Attitudes

- The migrants in this study came from highly regulated countries (China, Korea, Croatia) where they had lived in concrete block apartment buildings. Laws in these countries require apartment buildings to have fire protection mechanisms, e.g. hydrants. They commented that the New Zealand Government was wanting for not having laws to protect residential dwellings.

“When we lived in my country we had protection, smoke detector or fire resister, but when we come to this home there are no protection... New Zealand is not good”.

- Asian migrants in particular expressed a sense of helplessness if a fire breaks out and tended to focus on the remedial issues, regarding insurance as a safety net in the event of fire (eg mopping up after a fire by using insurance payouts).

Changes in Attitudes to Fire Safety

- Many respondents felt their attitudes to fire safety had not changed much over time. Respondents who felt their attitudes *had* changed, cited the following drivers of change in their attitudes to fire safety:
 - News stories about fire fatalities or near escapes. Respondents often empathised with the victims, particularly where children are involved. Media exposure of fires tends to increase respondents' awareness of the horrors of fire, and arouses feelings of *“what if it happened to my family”*. Local fires tend to have the strongest impact of all, especially in close knit provincial communities.
 - Television advertising and programmes such as documentaries. Many respondents were not aware of recent television advertising on fire safety, but often recalled advertisements seen more than a decade ago, such was their impact at the time.
 - On becoming a parent some people develop more safety conscious attitudes in general, because they are now responsible for the well being of their children. They also become more aware of the need to instil fire safe behaviour and attitudes in their children, and are exposed to school programmes dealing with fire safety.
 - Experience of a serious fire, either personally, or in one's immediate circle of family and friends, also impacts on attitudes to fire safety. In this study, two households had experienced fires in which they lost their home. In each case, they became more fire safety conscious after the fire, and put in place extra fire safety precautions.

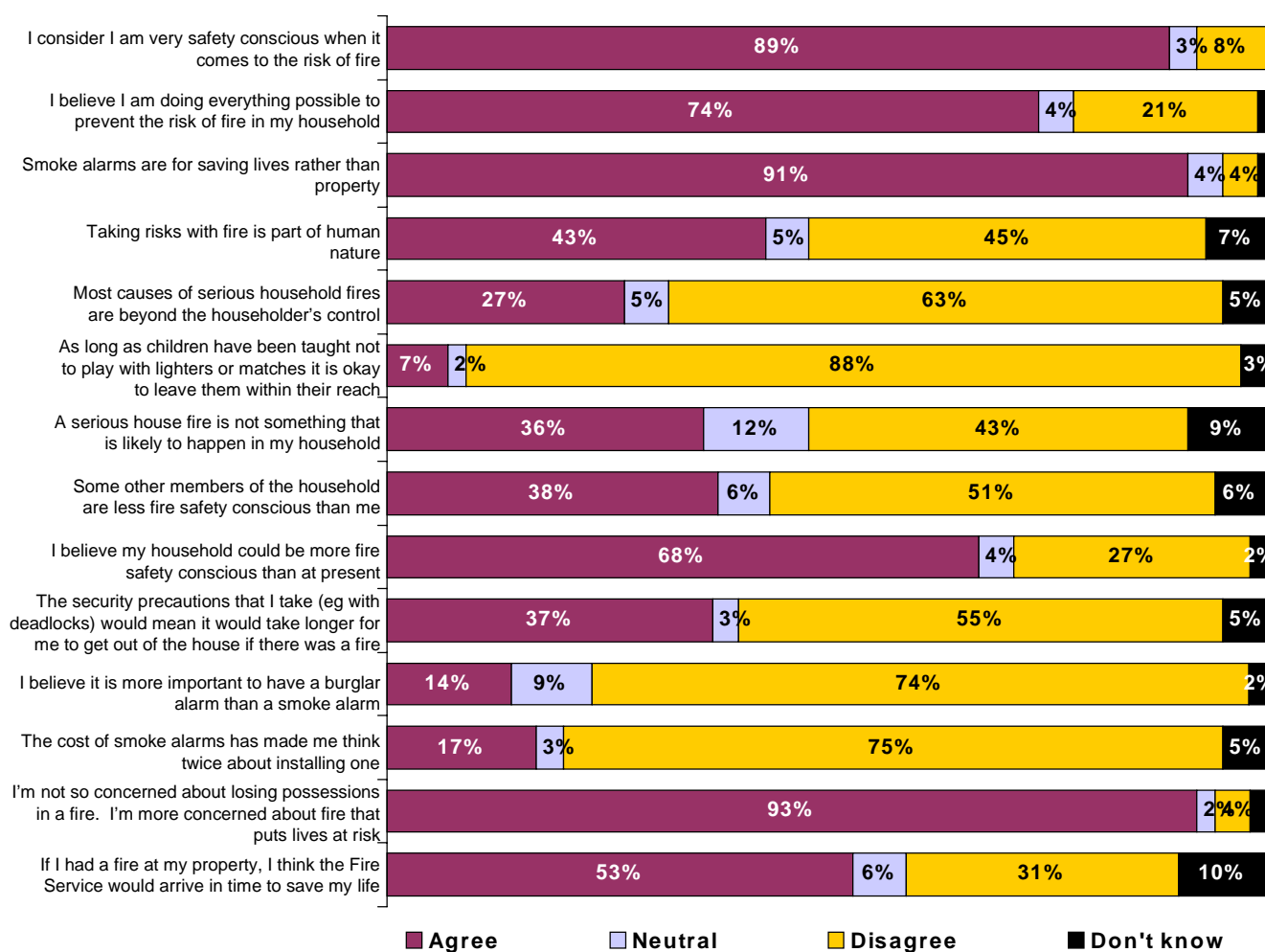
- Moving to a rural area with water restrictions or reduced fire services can also prompt more fire safety awareness and vigilance, both in thought and behaviour, as people know they don't have the back-up of the Fire Service. However, this change in attitude and behaviour can also be reversed. One household had spent a number of years living on Stewart Island, and had noticed since their return to the mainland that they were less fire safety conscious than previously.

“I have got a bit slacker perhaps... here I am a bit more complacent, being in town... the fire brigade is not far away, just around the corner – there is probably some degree of security in that.”

- An attitudinal change is not always accompanied by behavioural change when it comes to fire safety. Respondents' comments reveal that complacency, lack of priority (ie not getting round to doing things), lack of commitment, and lack of money are all barriers to more fire safe behaviour.

Key Survey Results

- The majority of people (89%) believe they are very safety conscious with respect to the risk of fire. They also believe that lives are more important than property.
- However, two thirds of people (68%) feel that they could be **more** fire safety conscious than at present.
- A reasonable proportion of the population (43%) accept that taking risks with fire is part of human nature. A quarter (27%) also believe that most causes of serious household fires are beyond the householder's control.
- Security precautions taken in a number of households (37%) are likely to inhibit a speedy exit in the event of a fire.
- The perceived cost of smoke alarms is a barrier to 17 percent of households installing them (or more of them).



Attitudes to Fire Safety By Level of Agreement

	Agree Strongly %	Agree A Little %	Neither/ Nor %	Disagree A Little %	Disagree A Lot %	Don't Know %
I consider I am very safety conscious when it comes to the risk of fire	67	22	3	6	2	-
I believe I am doing everything possible to prevent the risk of fire in my household	54	20	4	14	7	1
Smoke alarms are for saving lives rather than property	81	11	4	2	2	1
Taking risks with fire is part of human nature	18	25	5	16	29	7
Most causes of serious household fires are beyond the householder's control	16	11	5	23	40	5
As long as children have been taught not to play with lighters or matches it is okay to leave them within their reach	4	2	2	10	78	3
A serious house fire is not something that is likely to happen in my household	18	18	12	21	22	9
Some other members of the household are less fire safety conscious than me	21	17	6	18	33	6
I believe my household could be more fire safety conscious than at present	37	31	4	13	14	2
The security precautions that I take (eg with deadlocks) would mean it would take longer for me to get out of the house if there was a fire	18	19	3	21	34	5
I believe it is more important to have a burglar alarm than a smoke alarm	9	5	9	18	56	2
The cost of smoke alarms has made me think twice about installing one	10	7	3	17	58	5
I'm not so concerned about losing possessions in a fire. I'm more concerned about fire that puts lives at risk	82	11	2	2	2	2
If I had a fire at my property, I think the Fire Service would arrive in time to save my life	34	19	6	16	15	10

Analysis of Survey Results by Demographic Groups

- Many of the attitudes that exist follow similar patterns to behaviour, in terms of demographics.
- In particular, younger people (aged less than 34 years) and renters are considerably more likely to have less positive attitudes to fire safety and prevention.
- Males are more likely to be risk takers – believing that fire risks are part of human nature – and cocoon themselves with the belief that fires will not happen in their household.
- Maori and households with children recognise that they need to be **more** fire safety conscious.
- Ethnic groups where English is a second language (excluding Maori and Pacific Island people) place relatively greater importance on property and possessions than on saving lives.
- Aucklanders and rural households have a greater belief that fire engines will **not** arrive in time to save lives.
- Aucklanders are also more likely to agree that the (perceived) cost of smoke alarms makes them think twice about installing them.

8.0 Responsibility for Fire Safety and Prevention

8.0 Responsibility for Fire Safety and Prevention

Key Qualitative Findings

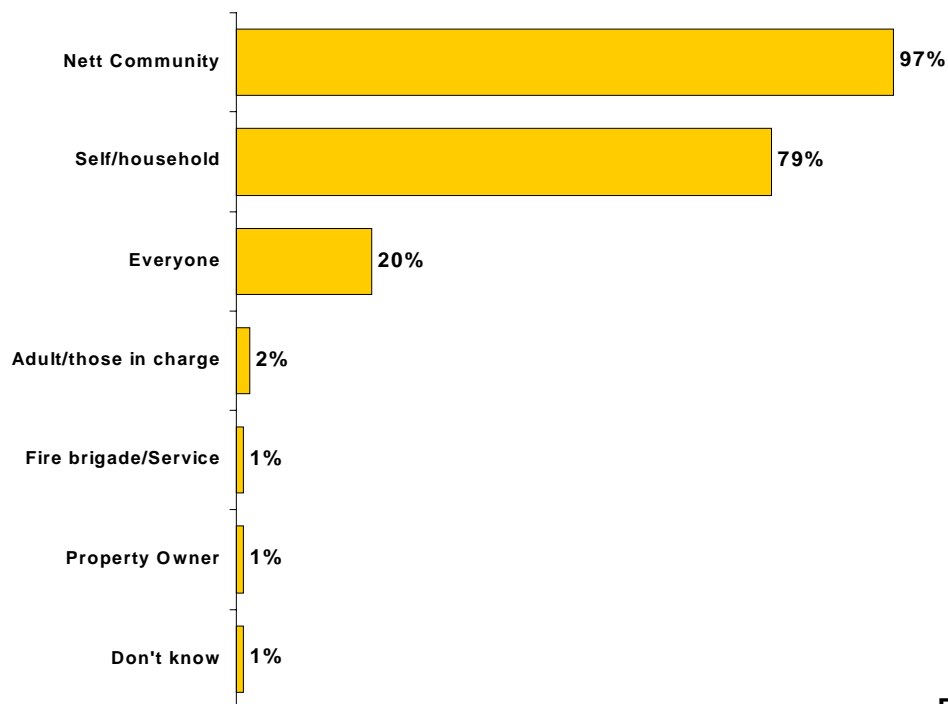
See earlier section on Attitudes to Fire Safety

Key Survey Findings

Responsibility for Fire Prevention

- Almost all people acknowledge that it is the community responsibility to prevent the risk of fires, and particularly the responsibility of themselves or other household members.
- Older people (aged 55 years plus) were more likely to consider themselves to be mainly responsible, whilst younger people (aged less than 34 years) were more likely to believe fire safety and prevention was everyone's responsibility.
- A belief that it is the Fire Service's responsibility for fire prevention was higher amongst Pacific Islands people (9%).

Perceived Responsibility to Prevent Fires

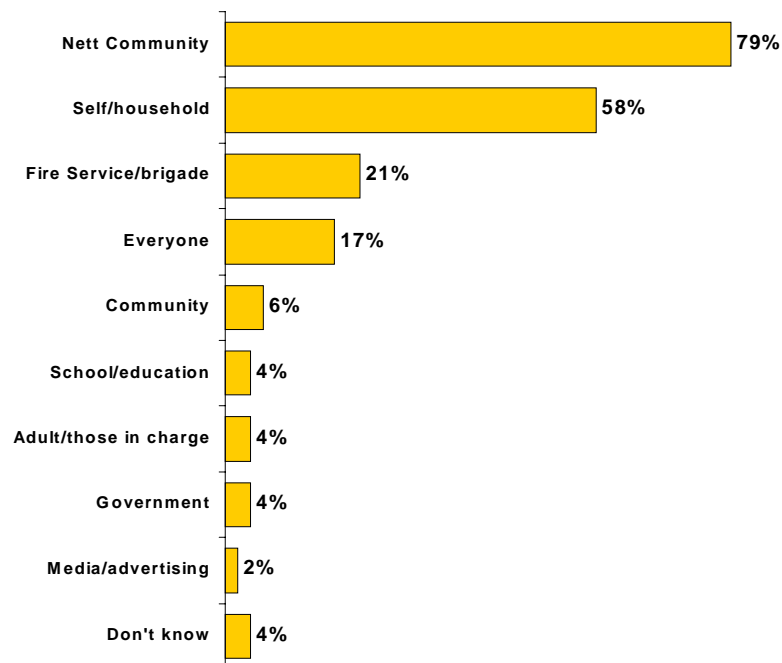


Base: 750

Responsibility for How to Put Out Fires

- The community was largely seen as responsible also for making sure people knew how to put out fires.
- The Fire Service was also perceived to have a greater role to play in this, particularly in the Southern Fire region (40%).

Perceived Responsibility to Make Sure People Know How to Put Out Fires

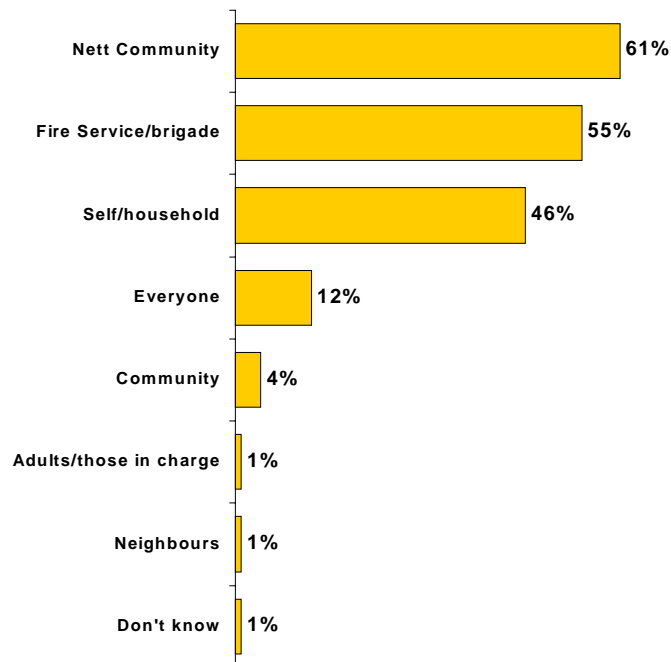


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Responsibility for Fire Suppression

- Moving along the continuum from fire prevention to fire suppression, the perceived role of the Fire Service increases.
- Just over half the sample (55%) believed it was the responsibility of the Fire Service for saving property or lives. The responsibility was seen as being shared between Fire Service and the community.
- The belief in Fire Service responsibility for fire suppression was greater amongst:
 - homeowners (59%)
 - people with brick/concrete houses (61%)
 - residents in the Southern region (71%)
 - New Zealand Europeans (60%)
 - medium and high socio-economic groups (62%)
 - non smoking households (59%)

Perceived Responsibility for Saving Property and Lives



Base: 750

9.0 Communication

9.0 Communication

9.1 Ways Used to Learn about Fire Safety

Key Qualitative Findings

- News stories about fires are a key source of information. The main things people learn from such stories are:
 - How fires start, eg children playing with matches, untended pots of oil catching alight, faulty wiring etc.
 - That smoke alarms can save lives. Respondents note that news stories about fires often conclude with the fact that the householders did/didn't have smoke alarms.
 - How quickly a fire can take hold and prevent people from being rescued.
 - At an emotional level, news stories remind people that fires can and do happen to 'people like them', and that fire has devastating results for people who lose family and property.
- Schools are a powerful source of information about fire safety. Parents in this study commented that their children often educate them about different aspects of fire safety, or prompt them to adopt safe behaviour.
 - Some households had worked out an escape plan as a result of the child being given this specific homework task.
 - In the process of learning about fire safety, children (and through them, parents) may learn 'slogans' which reinforce fire safety behaviour, such as "*stop, drop and roll*". Children as young as eight years in this study understood the meaning behind this slogan, and what to do if their clothing caught on fire. The catchiness of such slogans mean that they can be a powerful means of communicating fire safety messages to children and adults alike.
- Respondents often commented that fire safety knowledge was a matter of "*common sense*", and were hard pressed to identify how they have learnt what they know. Many people felt that their own parents had been a key source of information, and that parents were responsible for instilling fire safety behaviour in their children.

- Past television advertising has also been a source of information on fire safety. Respondents in this study commented that there has been little in the way of fire safety advertising on television in the past few years, and the advertising they recalled was often up to a decade old.

“There is nothing within the last three or four years that I can pinpoint saying ‘yes, that brought it to my attention’. The only thing that is in the last three or four years is that we have to look after ourselves more – the cut down in the Fire Service.”

- Television advertisements showing first incorrect and then correct ways of handling different types of fires are educative. Respondents recalled one such advertisement about how to deal with an oil fire on the stove. Advertisements which show the consequences of doing the wrong thing, and then the right thing, have impact and are suitable for use with children.
- Some respondents comment that they need to be shocked out of their complacency about fire, and suggest advertising along the lines of the road safety campaigns.

“It hits home better. It makes you think it could happen to you. I think it has better impact... I think it shakes people up”.

However, respondents comment that graphic ‘horror’ advertising can switch some people off, as do some of the road safety advertisements.

- One example of this was an advertisement showing children left in a car with matches who were burnt to death. Some mothers in this study did not regard this advertisement as suitable viewing for children as it would be too upsetting.
- Several adult respondents recalled an advertisement showing a couch catching on fire from a smouldering cigarette butt, and how quickly the chair was burnt once the fire took hold. This advertisement clearly had graphic visual and emotional impact, without portraying gruesome scenes (eg charred bodies).

“I saw it on a tv ad when I was little. From a smouldering cigarette butt on a couch to the whole room being ablaze in sixty seconds – it is quite scary actually, how fast... it was actually quite frightening... that is why it stuck with me.”

- Television documentaries and dramas such as Rescue 111 and 911 also provide vicarious learning for viewers. Some respondents noted news stories about how a child knew how to handle a situation because they had seen it depicted on television.

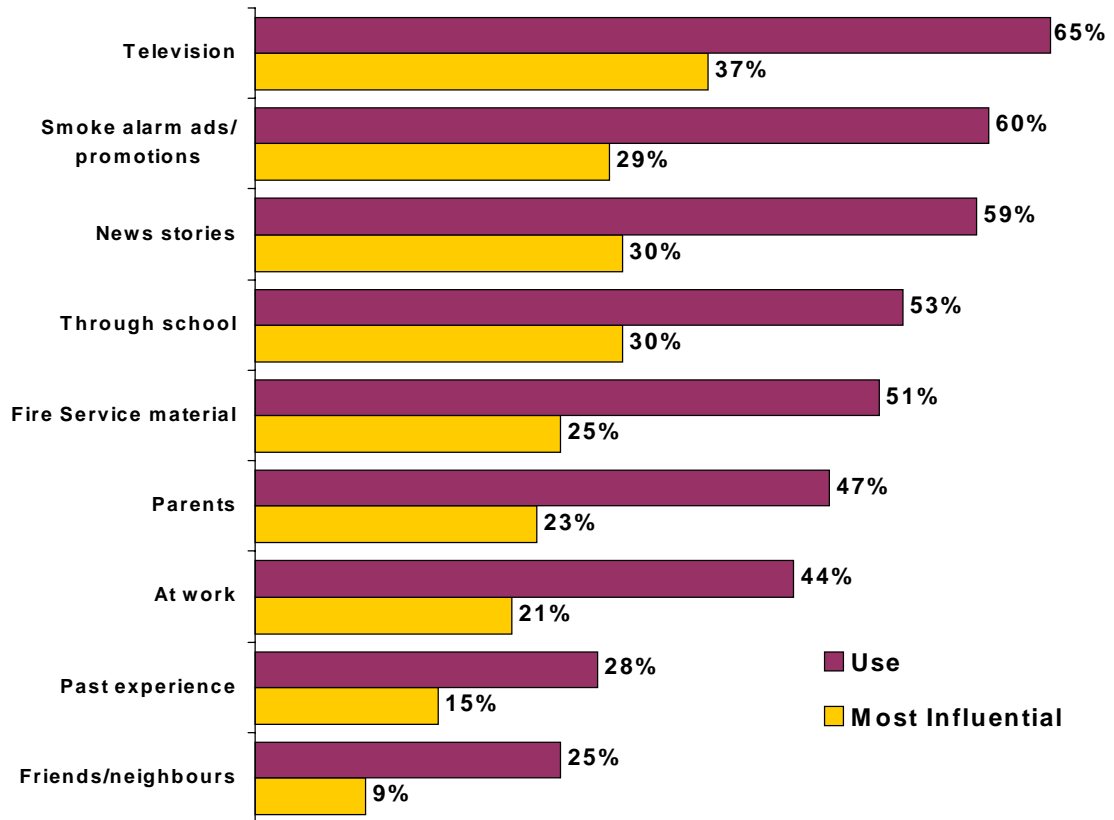
“Every now and again they have programmes... on what to do, what not to do – I have always watched them.”

- Smoke alarm promotions and advertisements are an important source of information in that they raise awareness that smoke alarms are relatively inexpensive, and in some cases prompt purchase.

Key Survey Results

- People use a variety of media to learn about fire safety (as described above). The media reported as having the **most influence** on people are:
 - Television advertising
 - News stories
 - School programmes
 - Smoke alarm promotions/advertisements
- The chart over the page illustrates this result.

Ways to Learn About Fire Safety



Base: 750

9.2 Targeting of Future Communications

The following analysis summarises the types of people who would be more likely to respond to fire safety messages via different media.

Media with most positive influence	Groups who are <i>more likely</i> to find this medium influential
Television advertising	<ul style="list-style-type: none"> Low socio-economic (45%)
News stories	<ul style="list-style-type: none"> No significant difference between groups
Through schools	<ul style="list-style-type: none"> Maori (45%) Households with children (39%) Renters (40%) Younger people (47%)
Smoke alarm promotions and advertisements	<ul style="list-style-type: none"> Low and medium socio-economic groups (33%)
Fire Service brochures and pamphlets	<ul style="list-style-type: none"> No significant difference between groups
Parents	<ul style="list-style-type: none"> English as a second language (32%) Younger people (27%)
At work	<ul style="list-style-type: none"> Minority ethnic groups (38%) English as a second language (30%)
Past experience with fires	<ul style="list-style-type: none"> Males (19%) Rural people (22%) Fire experienced (27%) Over 35 years age group (20%)
Friends and neighbours	<ul style="list-style-type: none"> Maori (16%) English as second language (23%)

9.3 Types of Information People Would Like to Have

Key Qualitative Findings

Respondents in this study expressed interest in the following types of fire safety information.

- Many respondents were keen to know the most common causes of household fires.
 - One respondent suggested that the Fire Service produce a pamphlet identifying all the potential causes of fires in and around the home.
 - Respondents would like to see television advertisements portraying situations relevant to them and their families, e.g. a busy mother cooking with kids running round. They feel that families are more likely to take notice if the advertisement portrays a situation they identify with.
- How to deal with/contain minor fires - e.g. the couch catches fire – before they spread.
- How to put out different types of fires, eg a fat fire, an electrical fire, a petrol fire, and what *not* to do in each case.
 - This study shows that many young people are not sure how to deal with electrical fire.

“I wouldn’t have a clue what to do. I wouldn’t know if I should chuck water on it, turn the power off. You see fire, people think they just chuck water at it [a fire]”.

- How many electric plugs can be safely put into a power point or multi box before overloading occurs.
- At what age a house’s wiring should be checked, eg an age guide, and how often.
- At what age and how often electric blankets should be checked.
- How many smoke alarms different sized houses need and where to position them in the home.

- One Pacific Islands respondent without smoke alarms wanted to know whether having a smoke alarm really makes a difference.

“Is there any difference in having a fire alarm installed and having no fire alarm installed in the house... will it stop your house from being burnt down? A lot of houses have been installed with fire alarms but they have been burned down.”

- How to treat someone suffering smoke inhalation.
- How often chimneys should be cleaned.
- How to use a fire extinguisher (*instructions would come with appliance*).
- This study suggests that migrants have specific information needs.
 - They need to be told and reminded of the emergency number for the fire brigade. Several migrants in this study did not know the correct number, confusing it with the emergency number in their country of origin.
 - Migrants also require information about how the New Zealand Fire Service works – ie when a fire happens, what they will do and what responsibility they have, and whether the householder has to pay for them to come to the house.
 - How to make a New Zealand home as safe as possible from the risk of fire.
 - Migrants also need to be told that New Zealand doesn't have laws about hydrants etc in homes and that rental homes are unlikely to have fire safety equipment provided (in contrast to some of their countries of origin).

Key Survey Results

- People appear to be hungry for any type of fire safety and prevention information. Critical information needs seem to be:
 - How to put out different types of fires
 - How and when to call the Fire Service
 - How to detect early warning signs of electrical problems
 - The best places to position smoke alarms

	Very Useful %	Somewhat Useful %	Not At All Useful %
How to put out different types of fires (eg electrical, chemical, fat, etc)	82	14	4
Know how to call the Fire Service	78	13	9
Early warning signs of electrical problems	77	19	4
Best places to position smoke alarms	76	20	4
When to call the Fire Service	75	17	8
How often smoke alarms should be checked	70	26	4
The most common causes of fire	69	25	6
How many smoke alarms are needed in the home	68	27	5
How to know whether to get wiring checked	67	26	7
How often electric blankets should be checked	64	25	12
The safest/most fire resistant materials for the house	63	30	7
Examples of where smoke alarms have saved lives	60	29	11
Base: 750			

10.0

Segmentation Analysis

10.0 Segmentation Analysis

Introduction

In order to identify and understand “at risk” segments from a different perspective, a segmentation was run based on people’s **attitudes** to fire safety and prevention, rather than on demographics as has historically been the case.

Respondents were read a series of statements and asked to indicate the extent to which they agreed or disagreed with each one using a five point scale where 1=Agree Strongly and 5 = Disagree Strongly.

The statements used in this process reflected a broad range of attitudes identified in the qualitative stage of the research.

The segmentation was performed using a cluster segmentation routine known as ACLUSTER. ACLUSTER operates by examining the inter-relationships between the scores given to statements by respondents.

How many segments exist?

The ACLUSTER segmentation process identified five segments of the population, with each differentiated from the others based on their attitudes to fire safety and prevention.

We have labelled these segments as follows:

1. **Abdicators**
2. **The Conscientious**
3. **Well Meaning Worriers**
4. **The Gamblers**
5. **Pragmatists**

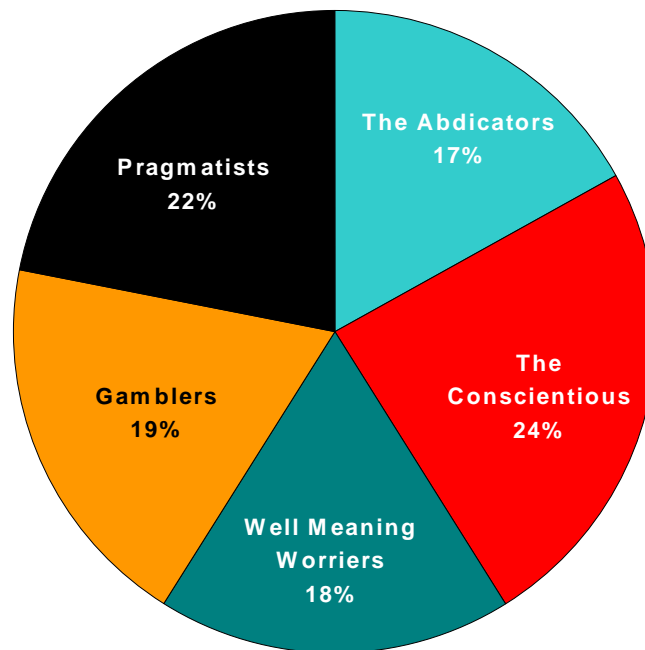
It is important to realise that each segment is not discrete. There are certain dimensions along which one cluster will overlap another.

What the segments (or clusters) show us is that each segment is **relatively more likely** than another segment to exhibit a particular characteristic.

Where no significant differences are apparent it can be assumed that those characteristics are shared equally among all segments.

How large are these segments?

The pie chart below indicates the relative size of each of the five segments in the overall population.



Having identified these segments, greater understanding of their nature was then gained through cross-tabulation analysis using demographic, attitudinal and behavioural measures.

Following are brief summaries outlining key points of interest relating to **each segment**, and key communication messages that would most likely appeal to people in that segment.

The most 'at risks' groups in terms of poor attitudes and behaviour with respect to fire safety and prevention are **Abdicators** and **The Gamblers**.

Case studies from the qualitative research have been provided to 'flesh out' each of the segments derived from the quantitative survey. While these case studies do not necessarily display *all* the attitudes and behaviour of the segments they illustrate, they provide a 'living example' of the kinds of behaviours and attitudes typical of that segment.

Fictional names have been used in the qualitative case studies to protect respondents' identity.

Segment One: 'Abdicators'

Comprise 17% of the population

Attitudes to Fire Safety and Prevention

We think we are doing everything possible to prevent the risk of fire, but often our behaviour doesn't show it. Anyway, most causes of fires are beyond the householder's control.

We have no smoke alarms – the cost of them is an issue to us – and having burglar alarms is more important.

We believe that taking risks with fire is part of human nature. As long as children have been taught not to play with lighters or matches, it is okay to leave them in their reach.

We could be more fire safety conscious that at present, but we also feel that a serious fire is not likely to happen in our household. We feel "*untouchable*". And, anyway, if we did have a fire, the Fire Service would arrive in time to save lives.

Demographics

- Households with school-aged children over-represented
- Pacific Islanders and other ethnic groups where English is a second language over-represented
- Lower socio-economic groups over-represented

Communications

- Less likely to learn about fire safety from smoke alarm ads or promotions, or from Fire Service pamphlets
- Key information needs are examples of where smoke alarms have saved lives and how often electric blankets should be checked

Segment One: 'Abdicators'

Tracy and Neil

Household and Home

Tracy and Neil are a lower socio-economic Caucasian couple living in rural Whangarei. They have five children aged three to twelve years with another baby due in November.

Tracy loves having babies and has her heart set on having eight or nine, but she finds that *doing* for five children leaves her constantly tired. To cope, Tracy does the bare minimum required and relies on the older children to help round the home, e.g. looking after the younger children and cooking meals.

Home is their own small three bedroom wooden house protected by a home security system (including fire extinguisher and blanket) purchased for \$3000.

Experience of Fire

Tracy is fairly familiar with fires, having experienced a number. Although she has commendable fire safety attitudes (see over page) these are not reflected in her behaviour.

- One of Tracy's children (when 18 months old) lit a match in the woodshed that started a fire. Quick action on the part of an older sibling extinguished the fire without too much difficulty. At the time, matches were generally *left lying around* the house.
- Another child had fallen into the wood burner as a baby and received burns to the hands and forehead. The fire was *not protected by a guard* (due to lack of money) and the older children who were supposed to be looking after the baby had become engrossed in watching tv and forgotten about the baby.
- An airing rack of clothes had *fallen into the wood burner* and caught alight – the rack had got knocked over by children fooling around when Tracy was out of the room. There was no guard on the fire (see above).
- Tracy's stove has caught on fire a couple of times usually because she hasn't *mopped up earlier spills* or has gone to bed and *left a saucepan on an element* that is going.

Fire Safety Attitudes

Tracy believes that it is the responsibility of parents, and to a lesser degree schools, to teach children about fire safety. When we spoke with Tracy she was coming under pressure from her school aged children to *work out* an escape plan. They had recently been learning about fires at school.

Tracy believes that people need to try and prevent fires happening, but if one occurs and gets out of control, that the Fire Service will take care of it.

Tracy considers saving lives is paramount in the event of a fire – she reasons that possessions can be replaced.

Fire Safety Behaviour

- While Tracy keeps lighters in high cupboards, she sometimes forgets to put them away.
- Tracy still dries clothes on the airing rack using heat from the wood burner, but places the rack away from the fire.

'Risk Taking' Behaviour

- Neil regularly smokes in bed and is casual about dropping his butts onto the carpet.
- Both Tracy and Neil leave spillages on the stove.
- The household wood burner is without a guard.
- Powerpoints are overloaded.
- The children put things on top of an oil filled heater.
- The older children are allowed to cook with little or no supervision.

Communications

Although Tracy identifies with fire safety advertising and media stories on fires, they don't have much impact on her behaviour. *"I was watching an article the other day on pre-schoolers starting a fire. I thought 'wow that could be us'".*

Possible explanations for the disjunction between her attitudes and behaviour include the amount of effort required to enforce/carry out safe behaviour, and lack of money (e.g. to buy a fire guard).

We believe that for any communications to change Tracy's behaviour, they would need to be of a comparative nature, e.g. 'for the cost of X packets of cigarettes you can buy a new fire guard', or emotive communications forcing identification, e.g. focusing on the impact of the loss of a child through fire.

Segment Two: 'The Conscientious'

Comprise 24% of the population

Attitudes to Fire Safety and Prevention

We are very fire safety conscious and are doing everything possible to prevent the risk of fire.

We have smoke alarms (cost is not an issue) and have practised our escape plans. Everyone in the household knows how to use the fire extinguisher and fire blanket.

We regularly test our electric blankets and never leave clothes drying close to electric heaters or open fires. We never leave spilled fat on the stove, never leave matches or lighters in the reach of children, and never have multiple plugs in power sockets without an overload cut-off.

Taking risks is definitely **not** part of our nature.

We don't believe we could be more fire safety conscious than at present. If there is a serious fire, anyway, the Fire Service will arrive in time to save lives.

Demographics

- Over-represented in Christchurch
- Homeowners and houses constructed of bricks/concrete with a garage over-represented
- Elderly people (aged 55 years plus) over-represented
- New Zealand Europeans over represented
- Urban dwellers over-represented

Communications

- Least likely that school related programmes will positively influence behaviour
- Very useful information to receive would be to know **how** to call the fire brigade

Segment Two: 'The Conscientious'

Arthur and Dulcie

Household and Home

Arthur and Dulcie are a retired Caucasian farming couple who moved to Christchurch several years ago. Dulcie continues to work part time. Their grandchildren live in the North Island and are occasional visitors.

When they sold their farm they bought a tidy newish home in a suburb of Christchurch. The house was bought with fire safety in mind – they wanted a brick home, and it has pink batts in the walls. Arthur is still concerned about the safety aspects of their internal access garage – he would prefer one that was separate from the house.

Experience of Fire

Many of Arthur and Dulcie's attitudes and behaviours derive from their farming background. They experienced a number of fires on their farm, eg when burning off, and consider these fires were largely unavoidable. Sometimes they called the fire brigade, some they "*handled*" on their own. On the farm the risk of fire was always in their minds and they took extra precautions due to the limited water supply and the lack of a fire brigade close by.

Fire Safety Attitudes

Now they are living in town, Arthur and Dulcie remain very conscious about fire risk, and say this is a product of their background. As homeowners they consider themselves to be responsible for preventing fires around their home and take this responsibility very seriously.

However, they don't believe that having fire safety equipment is a substitute for being careful and sensible. *"I don't think there is any substitute for common-sense... you get all these devices but you must use your senses."*

Dulcie admits they are less vigilant about fire than they were on the farm, as there are far fewer fire risks associated with their suburban home. In the back of their minds they also know the fire brigade is much closer at hand. *"You are in a town situation now. Theoretically you should get a brigade here in about five minutes if things were bad."*

Fire Safety Behaviour

- They chose a brick home with fire resistant insulation.
- They have got two smoke alarms. One was there when they bought the house, they bought the second one for outside the upstairs bedrooms. Arthur tests the smoke alarms and replace their batteries every three months.
- Dulcie is very aware of turning off appliances, and switches them off at the wall when they leave the house.
- They got rid of their electric blankets in favour of a 'Woolrest', largely for comfort and economy, but always had their electric blankets checked every year before they got rid of them.
- They keep a fire extinguisher in the adjoining garage because Arthur thinks this is the place where *"there is an element of risk"* of fire due to the presence of fuel.
- They have a thermostatically controlled gas heater and store the gas bottles outside away from the house.
- Dulcie *"wouldn't think"* of leaving something cooking in the oven when she was away from the house.
- They use a power board when they need to have more than one plug in an electric socket.
- They replaced a melted cord on their electric jug as soon as it was pointed out to Dulcie by a friend.

'Risk Taking' Behaviour

- Dulcie has melted a crockpot on a stove element by mistake, not realising that *the element was on*. It made an awful smell and ruined the pot, but it didn't catch alight.
- They don't have an escape plan - *"not in the true sense of the word... but I mean there is a lot of windows in the place and there are two doors, there is the garage and the ranchslider. The biggest problem [would be] if you got caught in the upstairs area... you would have to go out the window... you would have no option."*

Communications

Dulcie and Arthur's farming background and *"maturity"* have made them vigilant about the risk of fire. They also comment that many of the precautions they take are things they have done since they were *"knee-high"*.

Dulcie would like to see the public made more aware of the human cost of fire – *"I think if everyone was made to do a CPR course on burns and see the effect of burns... advertising has its place but sometimes you have to see things in real life."*

Arthur considers that the Fire Service could take a leaf from the anti-smoking lobby's book by communicating unsafe behaviour around fire as socially unacceptable. He is not so sure about adopting the shock tactics used by the anti drink-driving campaigners. *"I really wonder if the road advertising is overdone. I would sooner appeal to common-sense."*

Arthur feels it is important that people realise that having a smoke alarm is not enough to be safe from fire – *"you must keep up your other defences... all those things you did long before you had smoke alarms"*.

Segment Three: 'Well Meaning Worriers'

Comprise 18% of the population

Attitudes to Fire Safety and Prevention

We are also fire safety conscious and doing everything possible to prevent the risk of fire. We have smoke alarms and fire extinguishers. We never leave candles burning when no-one is home and never leave clothes drying close to an open fire (particularly with children around to knock the clothes frame over).

We avoid taking risks.

Smoke alarms are more important to us than burglar alarms. We could, however, be more fire safety conscious as we haven't practised our escape procedures and the security precautions we have around the house may mean it takes us longer to get out in the event of a fire.

Other household members are less fire safety conscious than me. We're worried that the fire brigade won't arrive in time to save lives.

Demographics

- Females over-represented
- Middle aged people (45-54 years) over-represented
- Households with school aged children over-represented
- Households typically comprise four members

Communications

Key information needs are:

- safest/most fire resistant materials for the house
- best places to position smoke alarms
- how often smoke alarms should be checked

How to detect early warning

Segment Three: 'Well Meaning Worriers'

Denise

Household and Home

Denise is a Caucasian in her forties living in Auckland with her husband and two sons aged 22 and 19. She describes herself as over anxious person generally. The family live in their own home – a twenty year old two storey brick and wood house.

Experience Of Fire

Denise had a house fire two years ago which was caused by her husband Bruce putting ashes in a rubbish bag and then putting it away in the garage to tidy up. The ashes were still glowing and started a fire which burnt half their house down. The fire caught alight in the time it made them to make a cup of tea, catching them by surprise.

This was a very frightening experience for Denise. She admits she forgot all about what she was supposed to do in the 'heat of the moment', for example she never thought to shut the doors in the house to reduce the smoke damage and spread of fire (luckily her husband did).

Fire Safety Attitudes

Denise had always planned what she would save if a fire occurred, but when it came down to it she realises that what is most important is to make sure people's lives are safe.

Her experience has made Denise even more fearful of fires – like others who have experienced fires, she know believes that you can't take anything for granted.

Denise has made sure her sons are 'up to speed' with fire safety precautions in the home – before the fire they were a bit casual, doing things like overloading power points without a second thought. Denise has made sure there are more powerpoints in the house, and has got her boys to think more carefully about fire risks.

Despite this, they remain less anxious and more casual about fires than Denise might like. One son recently had a small fire in the toaster – when his toast jammed and burnt. He didn't see it as serious and believed it would self extinguish.

Fire Safety Behaviour

- Before the fire Denise considered herself very careful about fire safety, e.g. they had several smoke alarms in house (after the house fire she regretted not having one outside), and she had a 'semi' escape plan (although she hadn't told other family members about it or practised it herself).
- Before fire Denise did some things she perceives as risky, such as leaving cooking oil spills on the stove, leaving cooking on the stove unattended for short times, casually dropping a teatowel on the stove after picking up a hot grilling tray, or putting a teatowel on the stove to dry (from the residual heat).
- Denise does an annual check of their smoke alarms and puts in new batteries at the same time.
- They have installed a fire extinguisher in the garage since the fire (because it proved to be the trouble spot) but still have no extinguisher inside the house.
- After fire Denise had alot more power points installed in the house and she unplugs all electrical appliances etc when leaving the house.
- Denise never fries with oil since the fire and never cooks chips on the stove (she now uses oven fries). She no longer dries clothes etc on top of heaters.
- Denise prefers to use a torch instead of a candle in a power cut for safety reasons. If a candle is used – no one is allowed walk around the house with the candle.

Risk Taking Behaviour

- Not having an escape plan organised – this remains 'inside' Denise's head.
- Not having a fire extinguisher in the house - Denise thinks they should have one upstairs and downstairs, but she has not taken action.

Communications

Denise strongly believes that you can't have fire messages given to you often enough - the more they are pumped into you the better - you are likely to remember what to do if a fire occurs. She is concerned that the panic of a fire can make you forget things – this is what happened to her.

Denise feels the most effective fire safety messages for her are those showing first the incorrect way to do something (ie risky behaviour) and then the right way.

She feels that communications should emphasise the importance of having smoke alarms and, ideally, also fire extinguishers in the home. Denise also feels that communications should focus on the importance of taking measures that save lives, ie that life is more important than possessions.

Segment Four: 'The Gamblers'

Comprise 19% of the population

Attitudes to Fire Safety and Prevention

We are definitely not fire safety conscious and it shows in our behaviour. Our risk taking outlook on life extends to risky practices around the home.

We have no smoke alarms (not because we can't afford them) although we believe they are more important than burglar alarms. We also have no fire extinguishers or fire blankets. In fact, we lack most forms of fire safety equipment.

We have no formal escape plans. We do not check electric blankets. We leave them on overnight and when we go out at night. We leave candles burning. We dry clothes close to or on a heater, and we leave fat spilled on the stove. Our electrical appliances usually have frayed cords. Matches and lighters are left lying around, heaters are left on unattended in a room and our power sockets are overloaded with plugs.

The risk of fire is highly likely in our household. We know we could be more fire safety conscious than at present and that preventing fires is within our control. But we don't do anything about it.

We live life to the fullest and take the consequences, as we **don't** believe the fire brigade will arrive in time to save our lives.

Demographics

- Renters over-represented
- Younger people (aged less than 35 years) over-represented
- No children or pre-school children households over-represented
- Part time workers over-represented
- Medium socio-economic groups over-represented

Communications

- Schools and parents are key information sources for this segment. School programmes, in particular, have the most positive influence on behaviour.
- Reflecting their overall attitude, they consider information on fire safety and prevention to be **somewhat** useful rather than very useful

Segment Four: 'The Gamblers'

None of the respondents in the qualitative study typified this segment. However, one respondent who had experienced a major house fire admitted to past behaviour which suggested his household are now what could be termed reformed 'Gamblers'.

Darren and Maria

The Household and Home

Darren and Maria are a lower socio-economic Caucasian couple living in Palmerston North. They have a six year old daughter and share their house with two boarders in their twenties. Both Darren and Maria are shift workers.

Home is a new four bedroom two storey house which Darren designed with escape routes in mind (their old house was destroyed by fire). It is protected by a home security system (including fire extinguisher and blanket) purchased for \$1,500 (for which they saved for three years).

Experience of Fire

Darren and Maria's last house burnt down when they were away for the night. No one was home but the ex state house was razed and all their possessions were destroyed. The fire was caused by faulty wiring, and Darren says it couldn't have been prevented. They had no smoke alarms, no planned escape route and no fire safety equipment in the house at the time.

Darren has since built a new home on the old site. This time he was vigilant about the wiring and has purchased power boxes with cut out switches.

Darren has more recently experienced a fire in his garage where he and his mates work on their cars. A petrol fire started when someone dropped a cigarette butt on spilt oil – his mate threw water on it, resulting in an even bigger fire – which they managed to put out.

Fire Safety Attitudes

Darren doesn't expect fire to strike them twice, but says he isn't "*taking any chances*". Since losing their house and all their possessions to fire Darren has taken all the precautions he can think off with the house, but he has a fatalistic attitude to fire – there is only so much you can do.

Darren's attitudes to possessions have changed radically since the fire – he doesn't care if a fire takes their home or things, as long as their lives are safe - people are more important than "*stuff*".

This attitude is reflected in his very casual approach to fire safe behaviour in the garage. He is unconcerned about the possibility of a fire in the garage because he reasons that no lives would be lost in such a fire.

Fire Safety Behaviour

- They have installed two smoke alarms since the fire, both are placed near sleeping areas. They spent \$1,500 on a combined burglar and smoke alarm system (but had to save up for three years to do so).
- Although all the adults in the household smoke, they confine their smoking to the sleep out (no children allowed), and wet their butts and bury them in the garden.
- The fire in the new house is closed-in and Darren says he will check the chimney every 18 months (it's not time yet). He carries ashes from the fire in a metal bucket and buries them in the garden. They always check the fire is out before leaving the house.
- They have an escape plan and each member of the household knows how to escape from their bedroom (however, actually practising the plan would be "*paranoid*"). The plan was thought through when the new house was designed.
- The household has a lot of electrical equipment, all of which is plugged into power boards with surge protectors and cut out switches (purchased since the house was built).
- They make a point of buying cotton nighties for their six year old.

'Risk Taking' Behaviour

- They sometimes have fat fires on the stove from unmopped up spillages. One of the boarders is very partial to deep fried food and has caused numerous stove fires.
- The real area of risk taking is in the garage where Darren and his mates work on their cars. There are numerous bottles of flammable liquids, which are not carefully stored, and lots of dirty rags lying around. Darren and his mates also smoke while they are working on their cars and this has started at least one fire (see fire experience). There is no fire extinguisher in the garage.
- They don't have a fire extinguisher or fire blankets. Darren reasons that these are expensive and other things can be used to suffocate fires. He is more interested in saving lives than property and possessions, and reasons that fire extinguishers are just for saving property.

Communications

Darren is not interested in saving possessions – he only cares that they are still alive, and all his behaviours are focused on saving lives rather than preventing a fire from destroying his property. This leads him to be very casual with fire risks outside his home, eg in the garage and sleepout.

Darren is fatalistic – fires do happen, it happened to him. He does not expect the Fire Service would save them in the event of a fire – they didn't save his house. From his point of view, the most important message to communicate is what people can do to save their lives in the event of a fire, ie make sure you can get everyone out alive by having smoke alarms and an escape route for each household member.

For Darren, this message could be reinforced by adding that having an escape plan is not enough – to be sure of saving lives people need to *practise* their escape plan.

Segment Five: 'Pragmatists'

Comprise 19% of the population

Attitudes to Fire Safety and Prevention

We consider ourselves fire safety conscious and are doing everything possible to prevent the risk of fire. We have smoke alarms, fire extinguishers and an escape plan from the house.

We don't believe that we can be more fire safety conscious than at present. However, we also accept that taking risks with fire is part of human nature. Our smoke alarms have never been tested.

Although we believe that most causes of fire are within the householders control, we are realists. If there was a serious fire, the fire brigade would not arrive in time to save lives.

Demographics

- General population but over-represented in the middle age (45-54 year) group

Communications

- Fire Service brochures and pamphlets a more important source of information

Segment Five: 'Pragmatists'

Rosie

Household and Home

Rosie is a Maori sole parent in her early thirties. She has four daughters aged between six weeks and 12 years. Rosie's five year old daughter is severely intellectually and physically handicapped.

The family lives in an old wooden house that Rosie considers would "*go up in a flash*" should a fire break out.

Experience Of Fire

- Rosie has had several fires one way and another over the years, none of which has resulted in a call to the fire brigade.
- Eight years ago Rosie left a pan on and left the room – she forgot the pan, the oil caught fire and the flames seemed to get fanned by the rangehood. Her partner Joe managed to rip the flaming rangehood off the wall and chucked it out the door.
- Joe came home drunk one night, tried to cook himself something and then fell asleep in the process – the stove caught fire. Rosie was woken by the smoke and found Joe asleep in a kitchen chair with smoke filling the kitchen. She managed to put that fire out but was furious Joe had been so careless.
- Rosie has the odd small fire on the stove from food splashes – she doesn't worry about these as they aren't serious fires, i.e. not life threatening.

Fire Safety Attitudes

After Rosie became a mother she underwent a complete attitude change about fire safety, having never given it much thought previously. Now she sees she is totally responsible for others' lives - she loves her kids dearly and never wants anything happen to them.

She believes parents have a responsibility to teach their kids about fire safety and to practise fire safe behaviour round the home.

Rosie's fire safety knowledge has increased through the kids coming home from school and telling her what they've been learning about fire, e.g. the importance of having and practising an escape plan.

Rosie worries about her 12 year old cooking herself food after school when Rosie is not home – she is concerned her daughter may cause a fire and has told her she can only cook noodles in microwave.

Fire Safety Behaviour

- They have one smoke alarm (Rosie would like more but says they can't afford them) – she had it installed after a news story about people dying in a house fire.
- The family has an escape plan and they have practised it.
- Rosie doesn't use the open fire in the house because the chimney has got cracks in it.
- When they did use the fire, her daughters were not allowed to put wood or coal on it.
- Rosie believes she is doing the right thing by buying her girls nightwear with red labels on them – which she thinks signals that they are inflammable (NB red labels in fact warn that the garment is made of flammable fabric).
- Rosie keeps her girls away from heaters when they are in their nightwear.
- When the family goes camping Rosie makes sure that the gas cooker is turned off when she's finished cooking. The kids are not allowed to use the cooker or go near it. She always uses the cooker in a sheltered position and always does a check of the valves before using it.

Risk Taking Behaviour

- Rosie is a smoker and leaves her cigarette lighter lying around. She says her daughters 'know' not to touch it. Other children are often in the house playing with Rosie's kids – she hasn't thought about the possibility of them playing with her lighter.
- While the family have an escape plan, and have actually practised it, the plan hasn't been updated since the arrival of the new baby six weeks ago, so they haven't planned and practised who would be responsible for the smallest children in a fire.

Communications

'Tragic' messages involving loss of life are most powerful for Rosie – they reinforce her need to protect her own girls and her vulnerability in the event of a fire.

Rosie would like to know more about how to contain small fires, e.g. if the couch caught fire what could she do to make sure it didn't spread. She would also like to know how to use a fire extinguisher (she doesn't own one but would like know how to use one if she had to e.g. in a public place, at her daughters' school etc).

Qualitative Case Study: Migrants

Household and Home

Deng is a Chinese male who immigrated to New Zealand about three years ago. He lives in Auckland with his wife and their two year old daughter. Two of Deng's sisters in law also live with them.

Deng is employed in the electronics field and has qualifications in the electrical field. Their home is made of brick and stucco.

Experience of Fire

Deng's family has had no experience of fire, either in China or New Zealand.

Fire Safety Attitudes

Deng believes that because fires can *take hold* very quickly when they start there is no point having fire safety equipment like a fire extinguisher or smoke alarms in the home.

Deng doesn't understand that smoke alarms are not to fight fires, but rather to alert people in the household to the presence of smoke. Deng feels that smoke alarms are a waste because if he was home he would smell any smoke, and if he was away from home then matters are beyond his control.

Although he engages in some fire safety behaviours, Deng says he isn't concerned about all the *"nitty gritty things about fire safety"* because he has homeowners' insurance and can get his property replaced or repaired if a fire occurs. In short, Deng is focused on the remedial rather than the preventative aspects of fire safety.

The household hasn't thought about an escape plan because Deng is confident that if they have a fire the Fire Service will respond quickly and save them.

Fire Safety Behaviour

- Deng checked the electrical wiring when he bought the house.
- It is a non smoking household.
- They never leaving cooking utensils unattended when on the stove.
- They don't overload power points.
- They use an oil filled heater (no open flame) to heat the home.
- They know not to put water on an oil fire.

'Risk Taking' Behaviour

Deng had *"no comments"* to make on this subject. The interviewer did not observe any risk taking behaviour in the areas of the house she saw.

Communications

Deng was not aware of any fire safety communications, either spontaneously or when prompted.

Communications suitable for targeting people like Deng would highlight the importance of fire prevention (e.g. that smoke alarms save lives by alerting people to fires) over remedial measures (e.g. having homeowners' insurance). They should also emphasise that people *can* have some control rather than being in a state of helplessness.