NOTTINGHAMSHIRE
Fire & Rescue Service
Creating Safer Communities

NFRS Problem Solving and Evaluation Workshop

Wednesday 13th June 2012

Problem solving and evaluation workshop

Table of Contents

Authors: Tom Simpson, Michelle McCudden, Ruth Dobson

1. S.A.R.A Model:

Scanning

Table 1.1:

What is the problem	• A detailed description of the problem, it should include; the behaviour, location, time, people and if applicable the commodity
How did the information come to attention	• Informant, community, agencies • How often has this issue been raised?
Any further information from other sources	• Evidence that the problem is perceived to be significant to both your organisation and at least some of the community
Why is it such an important problem?	• Far more problems are identified than can be explored adequately. How and why was this problem selected from among all the problems?
Who is the Problem Owner	• There will be a number of capable guardians who will take responsibility for implementing specific responses, however there will generally only be ONE problem owner
Behaviour	• Information specific to the problem behaviour. The behaviour should be described as a 'verb'
Location	• Information specific to the location of the problem should be detailed here
Timing	• Information specific to the timing (time, day, month, season etc) of the problem should be detailed here
People	• Information specific to the people of the problem is detailed here

Analysis

Table 1.2:

Who	• Who was involved in the problem and what were their respective motivations, gains and losses?
What	• What are they doing? • What's their motivation?
When	• When is it happening?
Why	• Why are they doing it? Why this behaviour? Why this location (why not another location nearby)? Why this time?
Where	• Where is this happening?
How	• How is it happening? How is the activity being 'done'?

Response

Table 1.3:

What is the desired outcome	• What does the Community want to happen • What does your organisation want to happen	
What actions have already been taken	• Responses already taken	
Responsibility	Suggested Responses	Timeframes
1.	• Your responses should clearly identify who has responsibility for implementing and monitoring the responses. • Responses must be realistic, achievable and in proportion to the problem. • Place them in order of importance. It may be that not all of the responses will be able to be implemented (due to resource or other constraints).	

Assessment

Table 1.4:

Output	• Were all the responses carried out?
Outcome	• What was the outcome in regard to the problem
Outcome	• Did we achieve the objective / were all desired outcomes achieved?

2. Evidence based practice:

SCANNING:

Problem identified in Area X:

Table 2.1:

Nottinghamshire District	Number of accidental dwelling fire incidents				Rate of change in the number of accidental dwelling fire incidents		
	Year 1	Year 2	Year 3	Year 4	Yr 1 - Yr 2	Yr 2 - Yr 3	Yr 3 - Yr 4
Area X	52	45	51	82	-13.50%	13.30%	60.80%

As a result of the **significant increase** in the number of accidental dwelling fire incidents (in comparison to previous years) in Area X, it is decided that NFRS needs to place additional focus upon initiatives/events which aim to reduce the occurrence of accidental dwelling fire incidents within Area X.

Past responses:

- In the past a fire and rescue service would have identified a problem (SCANNING) and then produced an intervention (RESPONSE), such as the one described below.

Example:

It is decided that a series of safety days will take place at the fire stations in Area X. These safety days will focus upon fire safety in the home and will aim to invite school children from the area. NFRS will target the schools which are located within areas of high deprivation.

- This RESPONSE, while beneficial, would have been unlikely to have been addressing the problem due to the limited ANALYSIS which had been carried out after the SCANNING had taken place.

- However today, as more detailed data is collected surrounding incidents, a fire and rescue service is in a far better position to be able to carry out detailed ANALYSIS in order to develop a more tailored and targeted RESPONSE.

ANALYSIS:

Further investigation: Fires in area X during year 4

- It is found that 64 (78%) of the accidental dwelling fires which occurred within area X during year 4 were cooking related fires.

- It is found that 59 of the cooking fires (72% of all the accidental dwelling fires and 92% of all the cooking related fires) involved leaving an item on the cooker.

RESPONSE:

Response 1:

*It is decided that a series of **safety days** will take place at the fire stations in area X. These safety days will focus upon fire safety in the home and will aim to invite school children from the area. Nottinghamshire Fire and Rescue Service will target the schools which are located within areas of high deprivation.*

*However there will be specific focus placed upon **cooking safety in the home**, specifically concerning the risks of leaving items on the cooker.*

Table 2.2:

Response 1:	
Strengths	**Weaknesses**
• The response is incident driven. • Schools provide a relatively easy access point for recruiting people for events. • School children are being educated about fire safety in the home. • Schools in likely higher risk areas are being prioritised. • Deprivation data is easily accessible. • NFRS is maintaining/developing positive public relations.	• Resource intensive. • If an entire area is highly deprived how do you prioritise which schools to target? • The targeted schools may not attend. • The availability of the crews may not be guaranteed for the duration of the event. • Although the response is tailored towards addressing issues regarding the causes of the incidents, no further analysis has been carried out to investigate which groups of people are experiencing such incidents.

• The content of the messages focus upon addressing issues which have been prevalent in causing the incidents, demonstrating the use of data ANALYSIS to influence the RESPONSE.	• Targeting schools, while useful, may not be addressing the issue which is behind the increase in Area X. Limited pre-evaluation (ANALYSIS).

ASSESSMENT:

Table 2.3:

Nottinghamshire District	Number of accidental dwelling fire incidents				
	Year 1	Year 2	Year 3	**Year 4**	**Year 5**
Area X	52	45	51	**82**	**83**

- The above **ASSESSMENT/EVALUATION** of response 1 suggests that it has not been successful in addressing the problem which it was developed to address.

- It is possible that this is due to the limited amount of investigation carried out during the **ANALYSIS** stage of the **SARA** model.

ANALYSIS:

Further investigation: Fires in area X during year 4

- Further analysis identifies that within area X during year 4 the accidental dwelling fire incidents have predominantly occurred within 2 council estates and 3 blocks of flats.

Data quality issues:

- Due to limited/missing data high risk groups/high risk behaviours cannot be established through studying the data regarding accidental dwelling fires in Area X.

    - Does the lack of information regarding the groups which experienced the fires mean that a 'one size fits all' approach is best?

        No. If data is not available for area X you should request additional information from the performance team. Data for fires throughout Nottinghamshire, or even national data, is likely to provide information concerning the risks associated with age, household occupancy, mosaic groups etc. Sometimes you need to examine a broader range

of data to identify trends, which (in the context of accidental dwelling fires) are likely to still be applicable to the more localised areas.

Analysing a broader data set:

Note: The following graphs and tables document the risk trends surrounding accidental dwelling fires across Nottinghamshire over a significant period of time.

Note: The data included is not real and has been produced for the purpose of this workshop and has therefore not been taken from NFRS IRS.

Figure 2.1:

Figure 2.2:

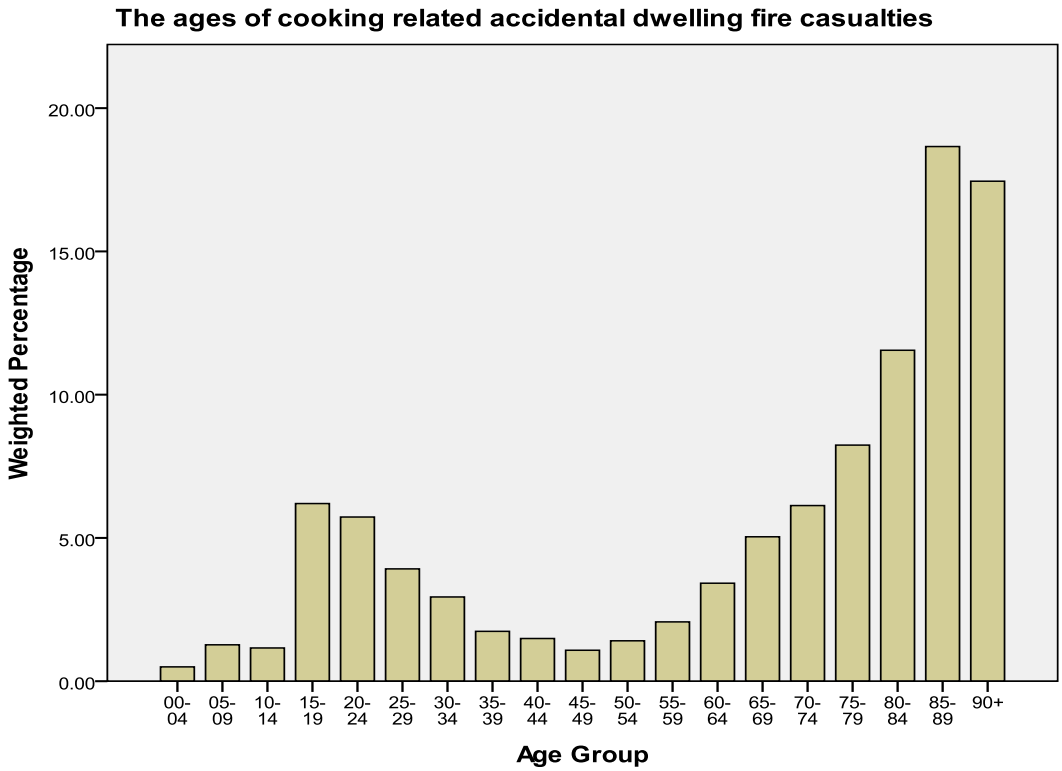


Table 2.4:

Human Factor	**Percentage of incidents**
Alcohol	38.0
Distraction	36.6
Other	12.3
Unknown	13.1
Total	**100.00**

Figure 2.3:

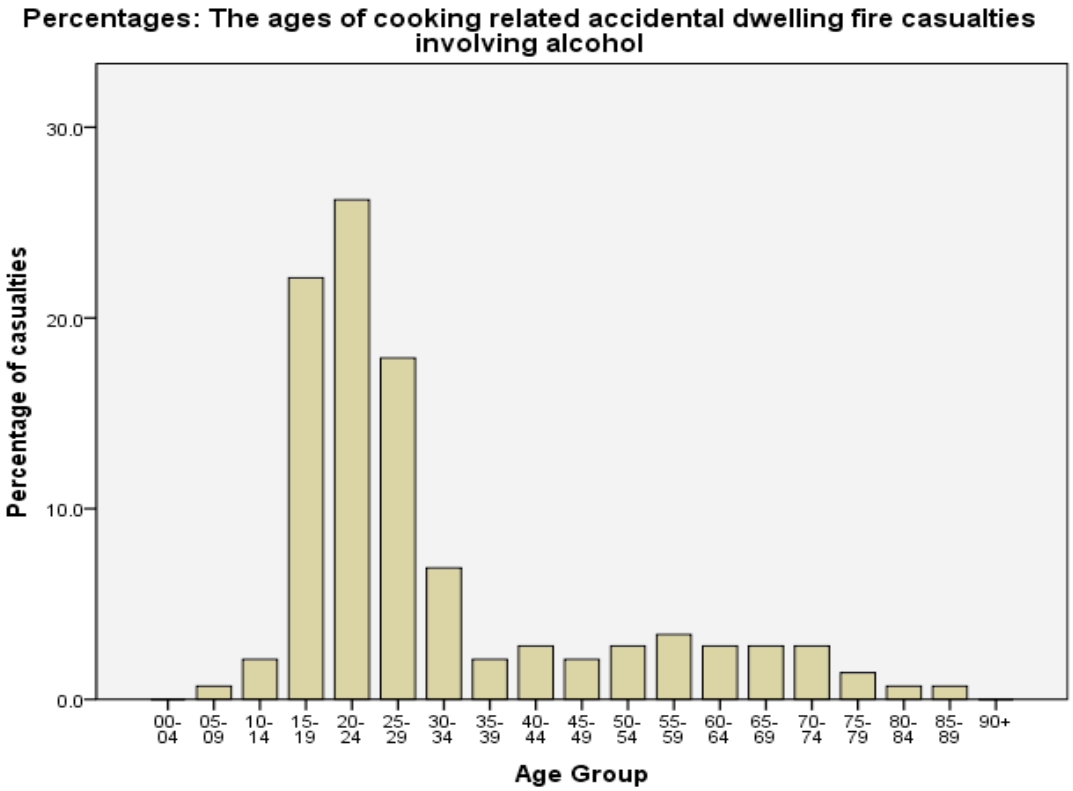


Figure 2.4:

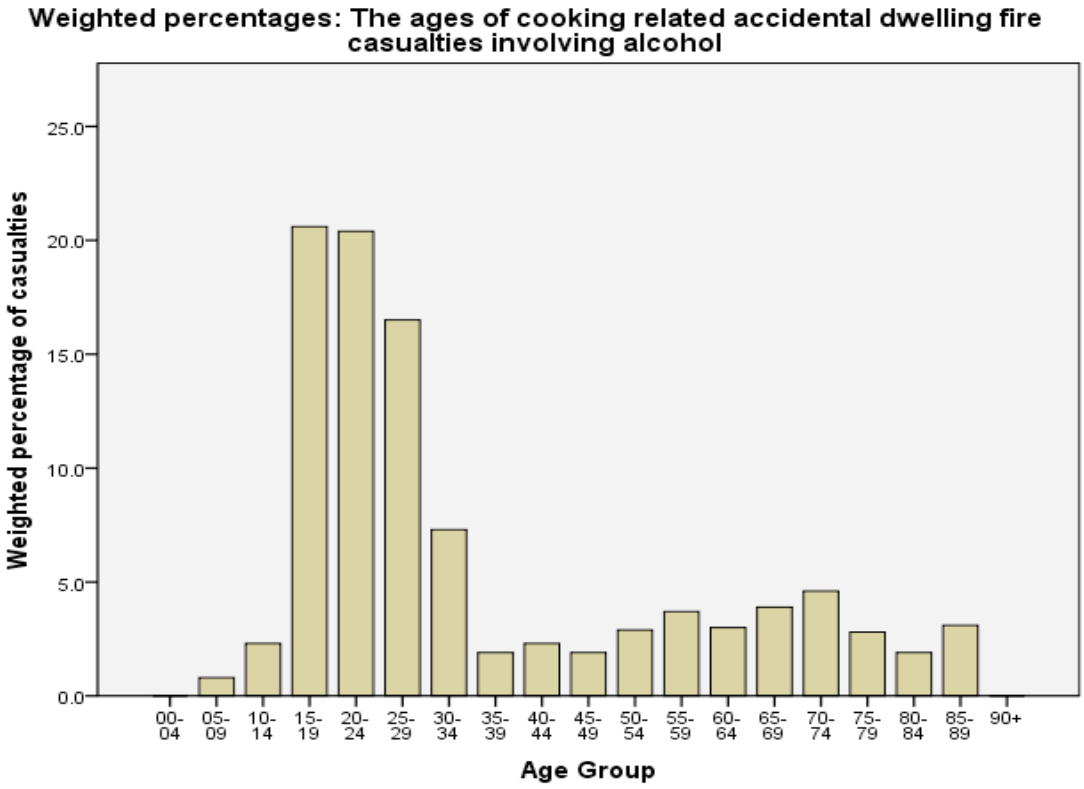


Figure 2.5:

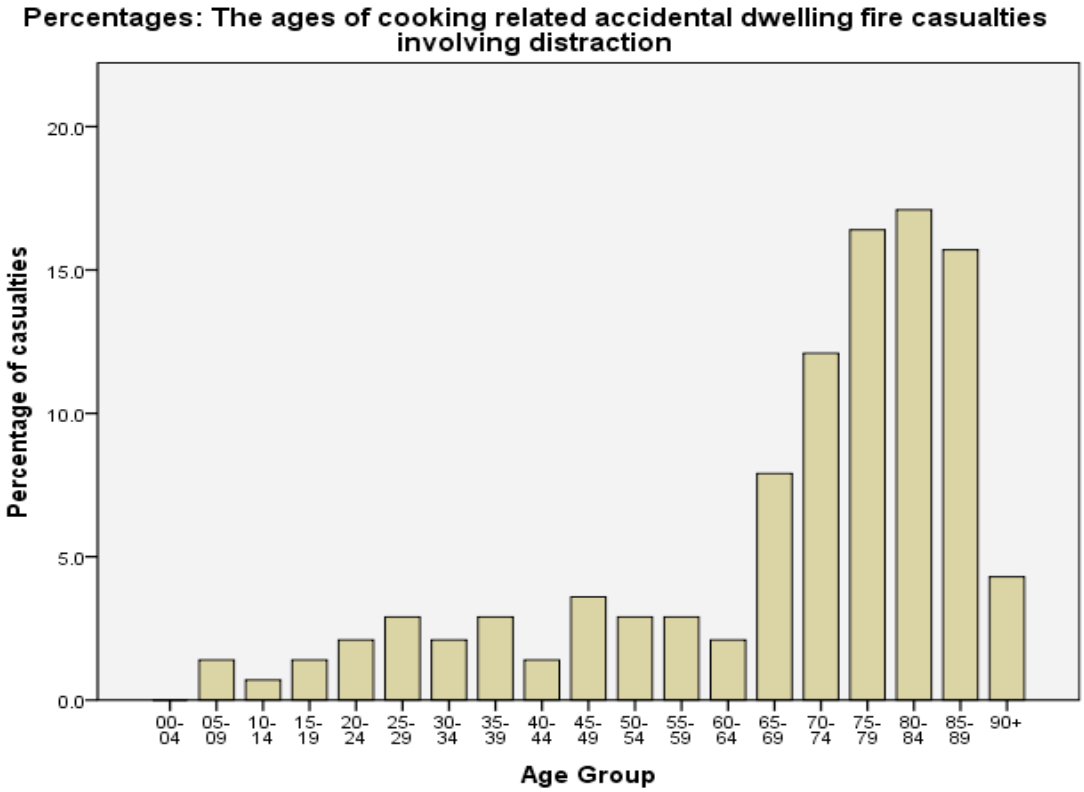
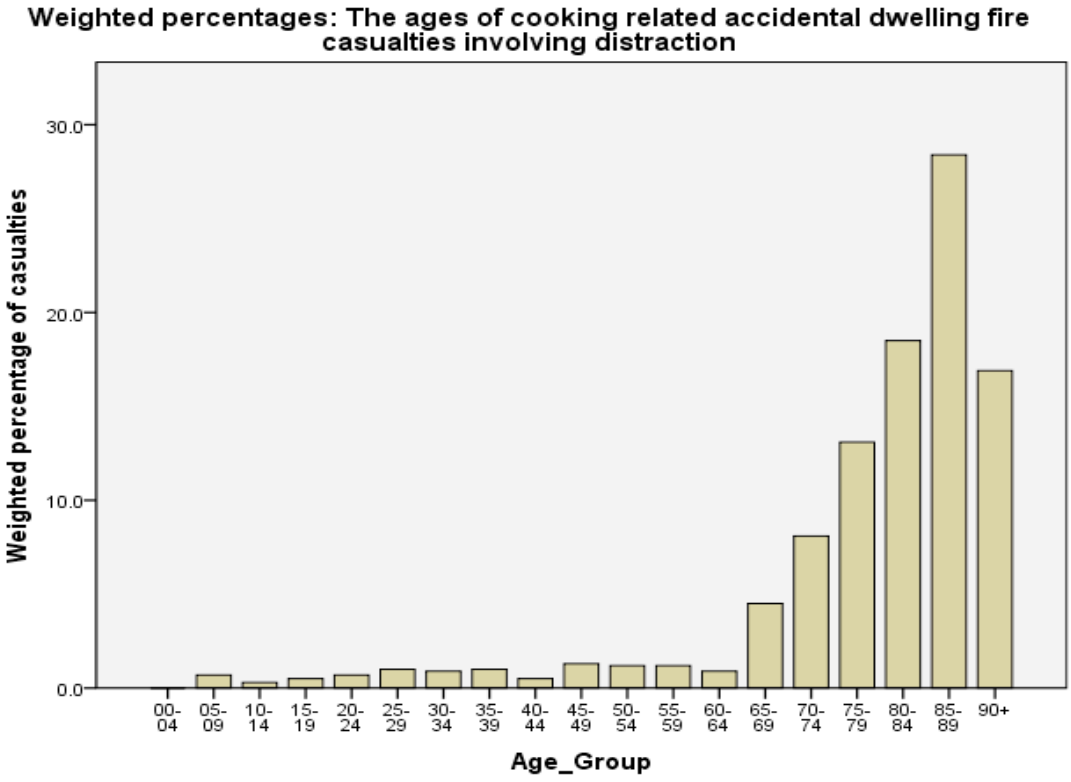


Figure 2.6:



What are weighted percentages?

Weighted percentages allow one to assess risk more clearly by indicating the likelihood of an incident occurring within a particular group or area, through weighting the number of incidents in relation to the population of the group or area. This enables the identification of areas or groups which have experienced a disproportionate number of incidents.

For example, when looking at all incidents 40% may have taken place in area A while only 10% may have taken place in area B. However due to a very large population in area A and a very small population in area B the weighted percentage would be greater for area B. This is because the risk in area B would be greater than in area A; demonstrated by the fact that if 100 people were randomly selected from each area it would be more likely that those from area B would have been involved in an incident than those in area A.

It is important to note however that weighted percentages should be used with caution and should be used in conjunction with, and not in isolation from, overall percentages. This is because when dealing with very small numbers the use of weighted percentages is not appropriate and has the potential to be misleading if not analysed within the context of actual figures.

Risk trends from a broader data set:

- There are two age groups which appear to be at a higher risk across Nottinghamshire; the younger age groups and the elderly age groups.

- The elderly age groups are actually the highest risk when taking into account weighted percentages.

- However the combination of overall percentages and weighted percentages still lead us to the conclusion that there are two higher risk age groups; the younger age groups (aged 15-24 – most likely because they account for a high proportion of the population) and the elderly (the data indicates that this group are a higher risk by definition).

- The younger age groups are more likely to have cooking related accidental dwelling fires as a result of drinking alcohol.

- The elderly age groups are more likely to have cooking related accidental dwelling fires as a result of distraction.

RESPONSE:

Response 2:

It is decided that a 'Safer Houses Initiative' will take place whereby the 5 locations in area X which have received predominantly the most accidental dwelling fires will be ***targeted*** *with a series of home safety checks and messages. The properties* ***which contain elderly people*** *will receive* ***information regarding the risks of distraction when cooking*** *and tenants will be given cooking timers. The properties* ***containing younger tenants*** *will receive* ***information focused upon the dangers of drinking alcohol and then cooking****.*

Table 2.5:

Response 2:	
Strengths	**Weaknesses**
• The response is incident driven. • In depth **pre-evaluation (ANALYSIS)** has led to the identification that across Nottinghamshire there are two different groups are at risk. However they are at risk for different reasons. • The response has taken this into account through looking to target the higher risk groups with tailored messages. • Like the station safety day, it is likely to be resource intensive. However the initiative is taking a pro-active approach, as it is looking to bring the initiative directly to the problem area, increasing the likelihood of the target population receiving the initiative.	• Labour/resource intensive • The method is intrusive/people may feel threatened. People may prefer to receive safety information outside of their home (eg safety day at a fire station). • People may refuse to answer their doors • It may be found that the tenants have previously received the interventions (smoke alarms/cooking timers) and ignored them.

ASSESSMENT:

Table 2.6:

Nottinghamshire District	Number of accidental dwelling fire incidents				
	Year 1	Year 2	Year 3	**Year 4**	**Year 5**
Area X	52	45	51	**82**	**49**

The above **ASSESSMENT/EVALUATION** of response 2 suggests that it has been successful in addressing the problem which it was developed to address

Concluding points:

- **Response 1** had been driven by incident data but the limited **analysis/pre-evaluation** means that it was unlikely to have been addressing the issue identified during the **scanning.**

- **Response 2** had been driven by incident data and developed in response to more in depth **analysis/pre-evaluation,** meaning that it was more likely to be addressing the issue identified during the **scanning.**

- Every **response** will have some weaknesses. However the subsequent **assessment/evaluation** will lead to suggestions for future improvement.

3. Evaluation:

3.1. Introduction:

- The evaluation process within fire and rescue service community safety activity involves assessing the extent to which the aims of a project/initiative/event have been achieved.
- This information is then used to make changes, if necessary, to future initiatives.
- Within the context of community safety, evaluation is particularly important considering the changing needs of the community.
- The information used will often be in the form of either **quantitative or qualitative data.**

Quantitative data: Numerical information which can be analysed using statistical methods.

Qualitative data: Non-numerical information

- This type of information can be categorical (eg marital status, household occupancy groups).
- However it can also refer to far larger forms of data (eg interview transcripts)

Table 3.1:

Quantitative Data	
Strengths	**Weaknesses**
• Quick to analyse (eg calculating rates of percentage increases and decreases) • Results for large data sets can be easily presented (eg frequency tables and graphs) • More objective	• Can clearly identify what is happening but not why • Limited information behind the cause – why has there been an increase in incidents?

Table 3.2:

Qualitative Data	
Strengths	**Weaknesses**
• Enables a more in depth understanding, addressing the question as to ***why*** a trend is occurring?	• Analysing large amounts of qualitative data (eg interview transcripts) can be time consuming

• Some qualitative data can be categorised and subsequently transformed into quantitative data and quickly analysed. • For instance human factors surrounding accidental dwelling fires will enable a greater understanding as to why such incidents are occurring amongst particular groups. However this information could be categorised (eg influence of alcohol, distraction etc) allowing quick analysis.	• More subjective • Gathering in-depth qualitative information, while allowing one to have richly detailed information, will be sample specific (eg not necessarily representative of others)

3.2. Principles of evaluation for NFRS:

- **Pre evaluation:**

  - A community safety initiative/event should be developed for a specific reason and have a specific aim, from which its impact can be measured. The aim of the initiative should be determined by the reason for which it is taking place.

  - For example if an initiative/event is developed because NFRS are having trouble engaging with a certain group in the community then the aim of the initiative will be to engage with that group, whereas if an initiative is developed because there have been a high number of deliberate secondary fires in a particular area then the aim of the initiative will be to reduce the number of deliberate secondary fires within the specified area.

- **Sharing of information:**

  - The outcomes of past initiatives/events should influence the delivery of future ones. This will be facilitated through the development of an **evaluation library**; the purpose of which will be share best practice, as well as learn from initiatives/events which have been unsuccessful. This will eventually lead to the continual improvement of the initiatives delivered to the community.

  - The evaluation library will record information on community safety initiatives/events, documenting their aims and objectives, the reason the event/initiative was delivered (community needs), how the achievement of the aims were measured (evaluation methods) and the result of the evaluation (this could be a detailed report or a couple of sentences).

- However the evaluation library will not only document whether the initiative/event was a success but will also include more general information, such as; whether the methods of evaluation were appropriate, whether there were too many/not enough staff involved in the initiative, whether there were enough resources available, whether the appropriate resources were available, how it could have been improved etc. Subsequently in the future whenever a new initiative/event is being planned the first task will be to search the evaluation library to determine whether similar work has been carried out in the past and whether the findings from the evaluation carried out will have a bearing upon the planning, delivery and evaluation of the new initiative/event.

- **Proportionality:**

  - The level of evaluation should be proportionate to the size, complexity and cost of the initiative/event. Therefore the more labour intensive methods such as questionnaires and interviews should only be used to evaluate the larger initiatives/events.

  - However it is important to note that in order to demonstrate whether an initiative/event has achieved its objective resource intensive evaluation methods (questionnaires, interviews) will not always be needed, even if the initiative/event is high in cost and resources. For instance if a partnership has been formed in a district with a charity the only necessary evaluation would be to determine whether the partnership work with the charity has led to NFRS being aware of vulnerable individuals who require Home Safety Checks, who they would have otherwise been unaware of. Therefore such evaluation would only require a summary of the information recorded on CFRMIS.

- **Acknowledgment of external factors:**

  - Cause and effect can never fully be established, due to the large number of external factors which are likely to be impacting upon whether or not the aim of an initiative/event is achieved. For instance a Home Safety Check could be carried out on a property, with all the appropriate safety measures installed and safety advice given, however the individual (s) may simply decide to ignore the advice. Alternatively, there may be external factors which help the achievement of an aim of an initiative/event, just as much, or potentially even more so, than the initiative/event itself. For instance the reduction in accidental dwelling fires in recent years cannot be simply attributed to the community safety work of the fire service, as external factors, such as safer household appliances, are likely to have also contributed.

  - Therefore it is important to acknowledge the limitations of evaluating the achievement of the aims of community safety initiatives/events; which are due to external factors. Consequently in some cases an initiative/event not achieving its aims may not be as a result of any weaknesses of the initiative but due to factors which are out of the control of the

initiative/event (eg very few people attended the community safety event due to adverse weather conditions), while in others the achievement of the aim may not be fully attributed to the initiative/event (eg other public sector organisations may also have carried out work to reduce certain types of incidents within a particular area, in addition to the fire service). Some external factors will be far easier to identify than others.

- However these limitations should not prevent evaluation from taking place, as evaluation enables us to develop an argument to ***determine the likelihood of impact.***

3.3. Identifying and measuring the aims of individual community safety initiatives/events:

Possible aims of community safety initiatives/events:

- To reduce the number of incidents
- To increase knowledge/awareness
- To identify vulnerable people
- To engage with the general public (positive PR)
- To engage with individuals within a high risk area
- To engage with a high risk group
- To engage with a hard to reach group
- To maintain good working relations with a key partner organisation

Table 3.3:

Community safety initiative/event	Aim (s)	Evaluation method to measure the achievement of the aim (s)
Fire station safety day for schools: Schools, predominantly from areas of high deprivation, will be invited to a multi-agency safety day at their local fire station, where they will be educated about fire safety in the home. Approximately 250 pupils will attend.	• To engage with schools in a high risk area • To increase knowledge of fire safety in the home • To maintain links with key partner agencies	• Keeping a record of the schools which have attended along with the approximate number of pupils (Did we engage with the targeted areas?) • Administering pre and post knowledge questionnaires. • Simply carrying out the event with the partner agencies is evidence of maintaining a key working relationship (Has the event led to the development of further collaborative

		work?)
Environmental scan of a high risk area: There have been a high number of deliberate secondary fires in a particular area. Therefore the idea behind the initiative is for fire crews to complete a scan of the area and report any issues so that appropriate action can be taken (eg cleaning, additional security measures).	• To identify and resolve hazardous issues • Reduce the number of deliberate secondary fires	• The documentation of all hazards identified and the action taken • Monitoring incident trends (once the initiative has taken place incident numbers within the area for each quarter, as well as collective quarters, will be compared to the same quarters from the previous year)
NFRS attendance at a local festival: NFRS will have a stand set up at the community event in which they provide the general public attending with fire safety information	• To maintain positive public relations/engage with the public	• Engaging with the public can be demonstrated through documenting the number of people who have visited the stall/collected the leaflet (ask individuals to fill in a demographics sheet – ***documenting no information from which they could be identified*** - just age, household occupancy, area of residency) • Who did we engage with? Who didn't we engage with? Who do we need to engage with?
Elderly persons' initiative: There have been a high number of accidental dwelling fires involving the elderly in a particular area. Consequently fire safety in the home messages will be targeted towards the	• To reduce the number of accidental dwelling fires involving the elderly within the area • To identify vulnerable people	• Monitoring incident trends (once the initiative has commenced the incident numbers within the area for each quarter, as well as collective

elderly groups within the area, through crews delivering talks and visits within particular places where elderly groups attend on a regular basis (eg Community Centres, Health Centres and Post Offices).		quarters, will be compared to the same quarters from the previous year) • Monitoring referrals – as a result of this initiative are NFRS now aware of high risk individuals who they were not previously aware of?

Recommendations (for all initiatives): These don't directly link into the aim, but it is important to document what went well, what didn't and how improvements could be made.

- The over-arching aim of NFRS community safety work is to create safer communities in Nottinghamshire and reduce incidents.

- However **individual initiative/event** aims need to be SMART (Specific, Measurable, Achievable, Realistic, Time constrained).

- Reducing incidents should only be a measure of an **individual initiative/event** if it is targeting a specific high risk area or a specific high risk group in response to a performance issue.

- Reducing incidents should not be a measure of the success of an individual school's educational initiative/event, as those receiving the initiative/event are unlikely to be impacting upon incident numbers in the short term.

- However, if information concerning educational initiatives/events is consistently recorded (eg how many pupils received the initiative, where do they live etc.) we will be in a better position to determine the ***collective impact*** of schools educational initiatives/events upon incident numbers in the future.

There is a difference between a high risk group or area and a hard to reach group or area.

- **High risk:** Incident data indicates that the group/area is experiencing a high level of incidents.

- **Hard to reach:** NFRS have had difficulty engaging with the group/area.

- Is a hard to reach group likely to be a high risk group? No, not necessarily.

3.4. Broader evaluation:

Recording information concerning individual initiatives/events (their aims, which groups they are targeting etc.) will enable a ***collective evaluation of initiatives/events*** delivered in a particular area to take place on a regular basis:

- What are the performance issues within area X?
- What is the predominant focus of the community safety activity within area X?
- Does the focus of initiatives align broadly with the performance issues? If not then there needs to be a change of focus and priorities, in terms of the issues which the initiatives/events are addressing.

Assessing the impact of a wide range of community safety initiatives/events:

- A collective impact assessment of community safety initiatives which have been delivered within a particular area during a particular time period can take place. Therefore the following tables/graphs will illustrate an impact assessment upon the initiatives/events delivered in area X between 06/07 and 10/11 which focused upon reducing deliberate secondary fires.

Figure 3.1:

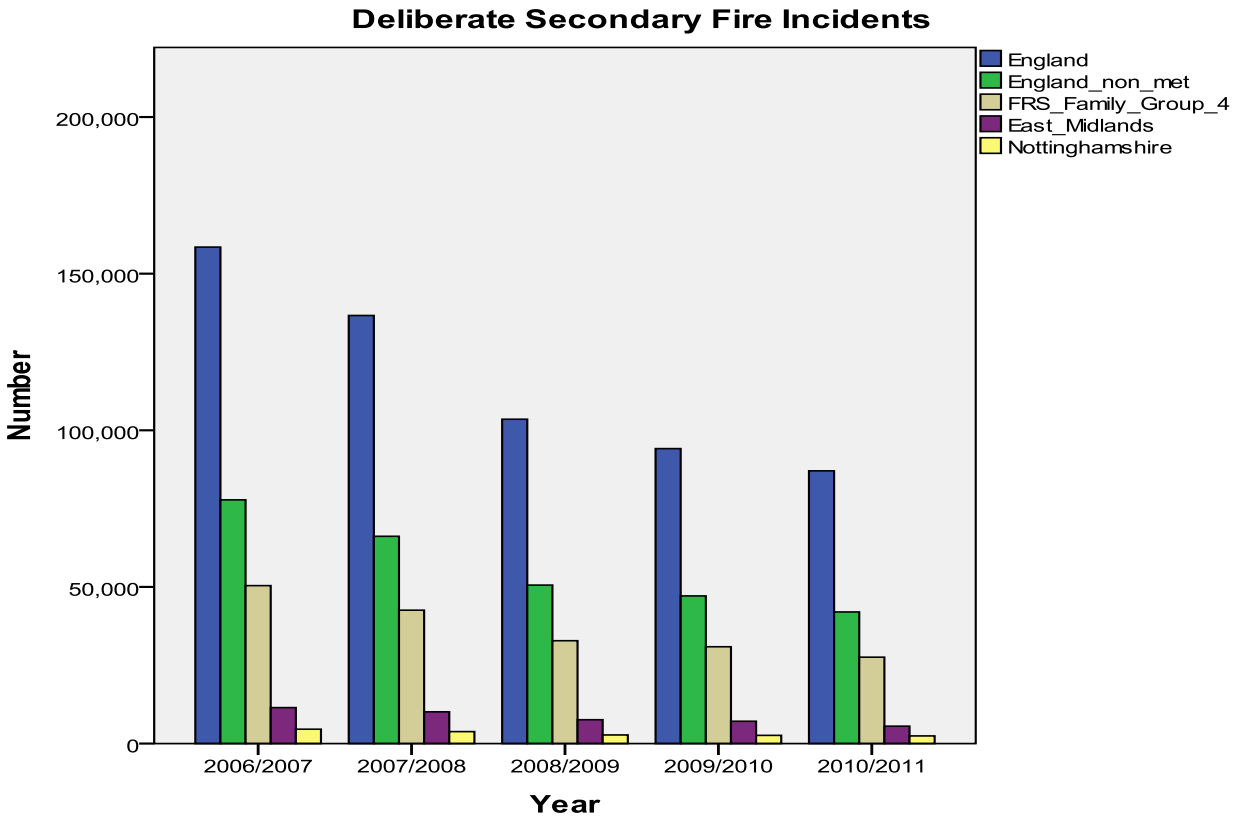


Table 3.4:

Location	Rate of change between 06/07 and 10/11 in deliberate secondary fires
Nottinghamshire	46.79% decrease
East Midlands	51.78% decrease
FRS Family Group 4	45.30% decrease
England (non met areas)	46.03% decrease
England	45.08% decrease

Table 3.5:

Nottinghamshire District	Rate of change between 06/07 and 10/11 in deliberate secondary fires
Area X	57.49% decrease

Table 3.6:

Location	Rate of population change between 2006 and 2010 within the 15-24 age group
Nottinghamshire	2.28% increase
East Midlands	2.67 % increase
Great Britain	2.58% increase

Table 3.7:

Nottinghamshire District	Rate of population change between 2006 and 2010 within the 15-24 age group
Area X	6.40% increase

Table 3.8:

Deliberate Secondary Fires	
Nottinghamshire District	**Rate of change between 06/07 and 10/11**
Area X	57.49% decrease

Table 3.9:

Reported Crime	
Nottinghamshire District	**Rate of change between 06/07 and 10/11**
Area X	43.37% decrease

Evidence to suggest that the NFRS initiatives/events delivered within area X between 06/07 and 10/11 contributed towards the reduction in deliberate secondary fires observed within the area during the same period:

- Within area X the number of deliberate secondary fires reduced at a rate in excess of that observed either regionally or nationally. This would suggest that any external variables which are likely to be impacting regionally or nationally cannot be fully attributed as being the reason behind the decrease in deliberate secondary fires within area X. This would suggest that a factor specific to area X is likely to also be contributing to the reduction in deliberate secondary fires observed within area X.

- Within area X the age group most likely (arguably) to be involved in these types of incidents increased during the same period, meaning that population trends are un-likely to have been a contributing factor to the reduction in deliberate secondary fires observed within area X

- Within area X the rate at which the number of deliberate secondary fires reduced was in excess of the reduction seen for reported crime. Therefore any factors which are impacting upon the general reduction which has been observed in criminal activity within area X cannot be fully attributed to the reduction in deliberate secondary fires, as the data suggests that something more specific is also contributing to the reduction in deliberate secondary fires within area X.

3.5. Questionnaire development:

Questionnaires are useful if a broad range of information (eg knowledge, opinions) needs to be collected from a large sample.

Types:

- Quantitative (only produce numerical data – eg a questionnaire comprised entirely of a Likert Scale)
- Qualitative (do not produce numerical data)
- Mixed

Question types:

- Closed questions: Participants are only given a limited number of responses (eg yes/no, married/single/widowed/co-habiting)
  - This means that data from the questionnaire can be more easily generated and analysed.
  - However it does not give participants the opportunity to provide in-depth information.

- Open questions: Participants are not given any constraints when answering the question (eg describe the current safety risks in your community?).
  - This means that the information gathered from the questionnaires will be far more detailed, enabling a more in depth understanding of attitudes, perceptions and opinions.
  - However it is far more difficult and far more time consuming to generate data from which analysis can take place.

Styles/Formats:

Directive

- "Describe your induction procedures"

Expansions

- "Have you received any community safety interventions? If yes, please give details"

Categorical choices

- Are you:

Married Single Widowed Co-habiting

Directed response

- What age are you____

Forced choice

- Are you happy Yes/No

Likert

	Strongly Agree				Strongly Disagree
I am happy	1	2	3	4	5

Qualitative lists

- What are the three biggest benefits of Home Safety Checks?

1)
2)
3)

Open ended questions

- What support did you get in your new role?
- How do you see the culture of your fire and rescue service?

Which to use?

The aim of the initiative/event will determine which styles of questions to use in a questionnaire.

- If the aim of the initiative is to measure specific learning outcomes, then it may be most appropriate and practical to include specific closed questions (addressing specific learning outcomes) in the style of established scales (eg, categorical choices, directed response, forced choice, Likert scale), so that pre and post measurements can be carried out and easily compared.

- If the aim of the initiative is to gain a more detailed understanding of opinions and perceptions then more open ended and less directive questions should be used (eg qualitative lists), so that answers are not limited and constrained.

- However the measurement of the aim of an initiative may require the measurement of learning outcomes using established scales, as well as the assessment of individual's opinions and perceptions. If so then a combination of both closed and open ended questions would be appropriate.

3.6. <u>Qualitative data analysis:</u>

Thematic analysis:

- The following participants were asked how often they test their smoke alarms.
  - After each sentence make a note of the predominant theme.

Please note that the answers below have been developed for the purpose of this workshop and are not real.

Participant 1:

Every week, without fail, I mean you've got to haven't you? There's no excuse, I mean yeah I had no idea how to do it initially, but once you actually take the time to read the fire safety leaflets, it's so simple, not technical or anything, I mean anyone can do it. At the end of the day, it's my house and no one else is going to make sure it's safe, it's up to me, and I'm the one who needs to be making sure all the safety measures are in place. In fairness I'm pretty responsible, like I always check everything is turned off before I go to bed, but you never know do you, there's always a bit of human error that could occur at any point. I have two kids and it's my responsibility to keep them safe, so testing the smoke alarm frequently is a must! I can't imagine if something happened and I hadn't realised the smoke alarm wasn't working, I'd never forgive myself. You've just got to do everything you can to protect your family and your house.

Participant 2:

Don't know, not sure I ever have done. To be honest I wouldn't know how. I mean that kind of stuff is the landlord's job isn't it? It's not like it's my house, we're only renting, so it's their responsibility to sort out all that technical stuff. There's no need for me to read up on how to do it! Anyway, I live with 5 others, one of them probably sorts out that kind of thing I'd expect, so no point everyone doing it. We're all pretty

sensible though, I mean none of us are going to do anything stupid like leaving the gas on, I know that we would all always checks everything is turned off, so don't really worry about smoke alarms and all that fire safety stuff.

Table 3.10:

Participant 1: Does check smoke alarm	Participant 2: Does not check smoke alarm
• Belief it was technical/Realised it wasn't after reading fire safety leaflet • Responsible for own property – need to test smoke alarm • Acknowledges they are sensible/Accepts human error can occur • Household occupancy – responsible for children-need to test smoke alarm	• Lack of awareness/knowledge • Belief that testing a smoke alarm is technical/Have not read any fire safety leaflets • Not responsible for property – don't need to test smoke alarm • Acknowledges they are sensible/Does not accept human error can occur • Household occupancy – other people live with them – no need to test smoke alarm, someone else will

Table 3.11:

Main Themes		
Responsibility	**Acceptance of human error**	**Misconception that checking a smoke alarm is technical**
• Responsible for own property – need to test smoke alarm (1) • Not responsible for property – don't need to test smoke alarm (2) • Household occupancy – responsible for children-need to test smoke alarm (1) • Household	• Acknowledges they are sensible/Accepts human error can occur (1) • Acknowledges they are sensible/Does not accept human error can occur (2)	• Belief it was technical/Realised it wasn't after reading fire safety leaflet (1) • Belief that testing a smoke alarm is technical/Have not read any fire safety leaflets (2)

occupancy – other people live with them – no need to test smoke alarm, someone else will (2)		

Findings from data:

- Owning a property may increase the likelihood of testing a smoke alarm due to a feeling of increased responsibility. This is in comparison to living in rented accommodation, whereby one may feel that it is someone else's role to test the smoke alarm.

- Household occupancy appears to influence whether the smoke alarm is tested. A responsibility for other household members will lead to testing the smoke alarm. Alternatively a perception of no responsibility for the safety of others in the house, while still living with other people, may reduce the likelihood of testing a smoke alarm as there may be belief that someone else will do it.

- If appropriate information has not been read there may be a misconception that testing a smoke alarm is a technical process, leading to avoidance.

- An acceptance of human error will increase the likelihood of testing a smoke alarm.

3.7. <u>Concluding points:</u>

- Quantitative information = what is happening.
- Qualitative information = why is it happening.
- Evaluation = the process of gathering this information and making sense of it.

It is important to emphasise that the evaluation process should encourage the development of innovative ideas for reducing risk through community safety initiatives/events. Its overriding purpose is to ensure that good practice is disseminated, less successful ventures are learnt from and community safety initiatives/events are specific and relevant for those receiving them. Ultimately it is just as important to detail initiatives which did not achieve aims as it is to record those which did.

Next step:

- Community safety advocates have started the process of completing community safety initiative/event report forms for **district specific initiatives/events** so that the evaluation methods discussed can be put into practice. The KTP Associate has recently visited all community safety advocates individually in order to explain how this process will work:

- Support with the initial stage of the process (analysis – identifying issues) will come from the performance team, and support with the later stage of the process (evaluation) will come from the KTP Associate.
- These community safety initiative/event report forms will be sent to the KTP Associate for approval. Subsequently they will be stored in a central evaluation library within the NFRS intranet. However until this library has been implemented advocates can e-mail the forms to the KTP Associate.
- Community safety advocates will receive individual help and support from the KTP Associate and will also be able to make use of an evaluation toolkit.
- The content of the evaluation toolkit has been completed, although it currently being reviewed. However until the evaluation toolkit is available on the intranet a smaller, more concise, document will be provided specifically to assist community safety advocates with the community safety initiative/event report forms.

4. Annex:

4.1. Calculation of weighted percentages:

Note: The data included has been produced for the purpose of this workshop and has therefore not been taken from NFRS IRS. However the actual trends it demonstrates are representative of real data.

Accidental dwelling fire casualties:

Table 4.1:

	A	*B*	*C*	*D*	*E*	*F*
1	**Age Group**	**Number of casualties**	**Percentage**	**Population**	**Weighted percentages calculation1**	**Weighted percentage**
2	00-04	3	0.8	59940	(B2/D2)	(E2/E21)*100
3	05-09	7	1.8	55500	(B3/D3)	(E3/E21)*100
4	10-14	7	1.8	60780	(B4/D4)	(E4/E21)*100
5	15-19	45	11.8	73020	(B5.D5)	(E5/E21)*100
6	20-24	50	13.1	87860	(B6/D6)	(E6/E21)*100
7	25-29	29	7.6	74460	(B7/D7)	(E7/E21)*100
8	30-34	19	5.0	64980	(B8/D8)	(E8/E21)*100
9	35-39	13	3.4	75080	(B9/D9)	(E9/E21)*100
10	40-44	12	3.1	80980	(B10/D10)	(E10/E21)*100
11	45-49	8	2.1	74680	(B11/D11)	(E11/E21)*100
12	50-54	9	2.4	64400	(B12/D12)	(E12/E21)*100
13	55-59	13	3.4	63060	(B13/D13)	(E13/E21)*100
14	60-64	21	5.5	61800	(B14/D14)	(E14/E21)*100
15	65-69	24	6.3	47880	(B15/D15)	(E15/E21)*100
16	70-74	25	6.5	41020	(B16/D16)	(E16/E21)*100
17	75-79	28	7.3	34180	(B17/D17)	(E17/E21)*100
18	80-84	29	7.6	25260	(B18/D18)	(E18/E21)*100
19	85-89	28	7.3	15100	(B19/D19)	(E19/E21)*100
20	90+	12	3.1	6920	(B20/D21)	(E20/E21)*100

21	**Total**	**382**	**100.0**	**1066900**	**(E2:E20)**	**(F2:F20)**

Table 4.2:

	A	***B***	***C***	***D***	***E***	***F***
1	**Age Group**	**Number of casualties**	**Percentage**	**Population**	**Weighted percentages calculation1**	**Weighted percentage**
2	00-04	3	0.8	59940	0.0000500501	0.50
3	05-09	7	1.8	55500	0.0001261261	1.27
4	10-14	7	1.8	60780	0.0001151695	1.16
5	15-19	45	11.8	73020	0.0006162695	6.20
6	20-24	50	13.1	87860	0.0005690872	5.73
7	25-29	29	7.6	74460	0.0003894709	3.92
8	30-34	19	5.0	64980	0.0002923977	2.94
9	35-39	13	3.4	75080	0.0001731486	1.74
10	40-44	12	3.1	80980	0.0001481847	1.49
11	45-49	8	2.1	74680	0.0001071237	1.08
12	50-54	9	2.4	64400	0.0001397516	1.41
13	55-59	13	3.4	63060	0.0002061529	2.07
14	60-64	21	5.5	61800	0.0003398058	3.42
15	65-69	24	6.3	47880	0.0005012531	5.04
16	70-74	25	6.5	41020	0.0006094588	6.13
17	75-79	28	7.3	34180	0.0008191925	8.24
18	80-84	29	7.6	25260	0.0011480602	11.55
19	85-89	28	7.3	15100	0.0018543046	18.66
20	90+	12	3.1	6920	0.0017341040	17.45
21	**Total**	**382**	**100.0**	**1066900**	**0.0099391115**	**100.00**