



Detection Data Summary June 2018

Overview

The purpose of this work was to understand what detection is currently being fitted in the fire sector and why. The aim was to gather detection data from fire & rescue services. The intention is to share this data to inform and in some cases, increase awareness around performance of alarms and to also gather feedback for the detection position statement.

This piece of work is part of the detection work stream, which sits within the Assisted Technology Group and the Home Safety Committee. There are four elements to this work stream:

- Current concerns around performance
- Future development & research
- Standards & legislation
- Collaboration and best practice

A template was issued to all services to collect data on the following areas:

- Types of alarm being fitted
- Position statement
- Smoke alarm testing advice
- Annual orders vs return rates
- Smoke alarm ownership found at incidents and home visits
- Best practice

The data was collected from March through to June 2018. There were 39 responses and the below is a summary of those returns.

Types of smoke alarms

Supplier:

- 30 Fire services main supplier is Sprue. (FireAngel Safety Technology Limited from July 2018)
- 9 Fire services main supplier is Fire blitz.

There is an acknowledgement that some services use a mixture of suppliers for hard of hearing and heat detectors.

4 of the 9 Fire Blitz Fire services are Scotland and Wales (North, South and Mid/West) just to add some context around supplier coverage.

All FRSs are using optical alarms, with the majority using a mixture of thermal multi sensor or enhancer.

Heat detectors:

- 16 of the 39 FRSs provide Heat detectors (41%).
Order numbers are mainly in the hundreds.

CO detectors:

- 22 of the 39 FRSs provide CO detectors (56%).
Order numbers vary from mid hundreds to mid thousands.

Interlinked detectors (not hard of hearing):

- 16 of the 39 FRS have fit interlinked alarms (41%).
No real data provided on numbers.

Hard of hearing alarms:

- 36 of the 39 FRSs provide Hard of hearing alarms (92%).
Numbers are mainly in the hundreds.

Position statement

- 33 of the 39 FRSs have stated they agree with the current statement around fitment of detection (85%). This statement is the revised CFOA positional statement which was released in 2016.

Comments from FRSs are captured below:

'Hall and landings only linked when obvious serious risk is evident. All fittings are based on findings at the visit if extra equipment identified it will be provided'.

'Do not disagree with above statement as detection throughout the home would be ideal, however recommend fitting smoke alarms in the circulation areas based on one per level. Additional smoke alarms are fitted in other rooms of the house based on risk identified in our safe and well visit'.

'Agree, that's a good statement, encompassing what we could and would deliver if budget were not a constraint'.

'Agree with the content of the statement but wording should state - smoke alarms suitable to the occupiers needs'.

'Importance of a WORKING smoke alarm should be reiterated. Whilst the statement is best practise the additional costs of interlinked and heat alarms may not allow some services to install the qty of smoke currently delivered'.

'We currently fit alarms on the staircase, differing floors and hallways of properties. We recommend alarms in all rooms but only fit these for higher risk vulnerable persons'.

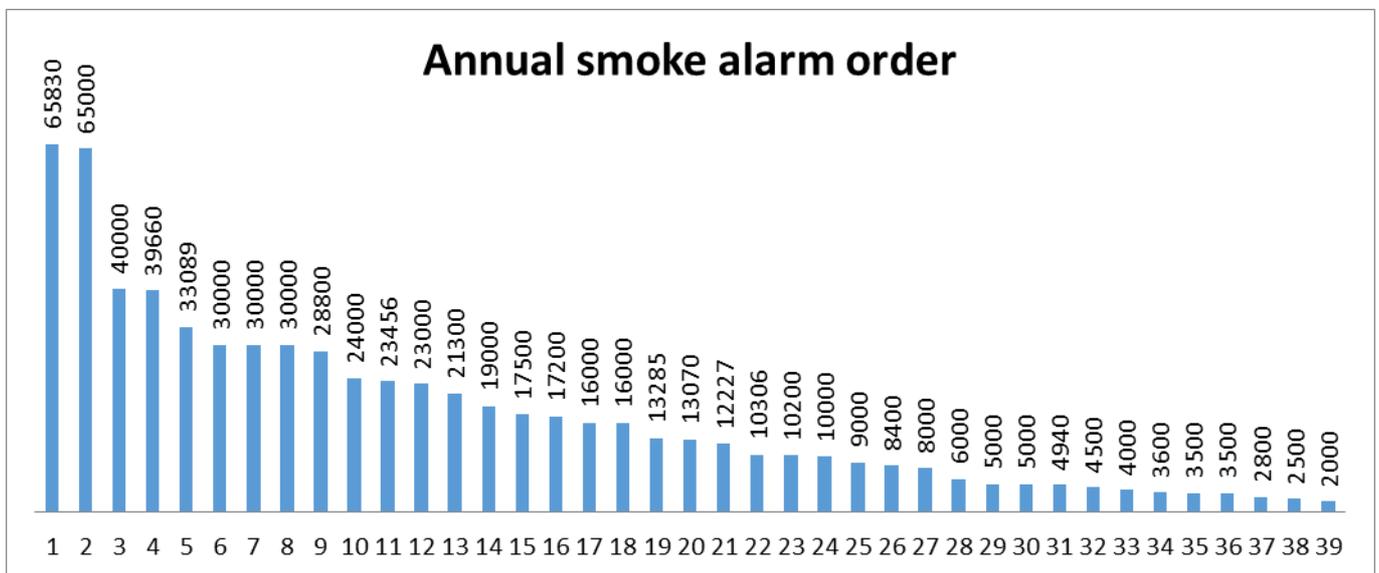
Smoke alarm testing advice

Weekly	23
Monthly	5
Manufacturers advice	2
Linked to specific timing (only)	0
Mixture	8
Left Blank	1

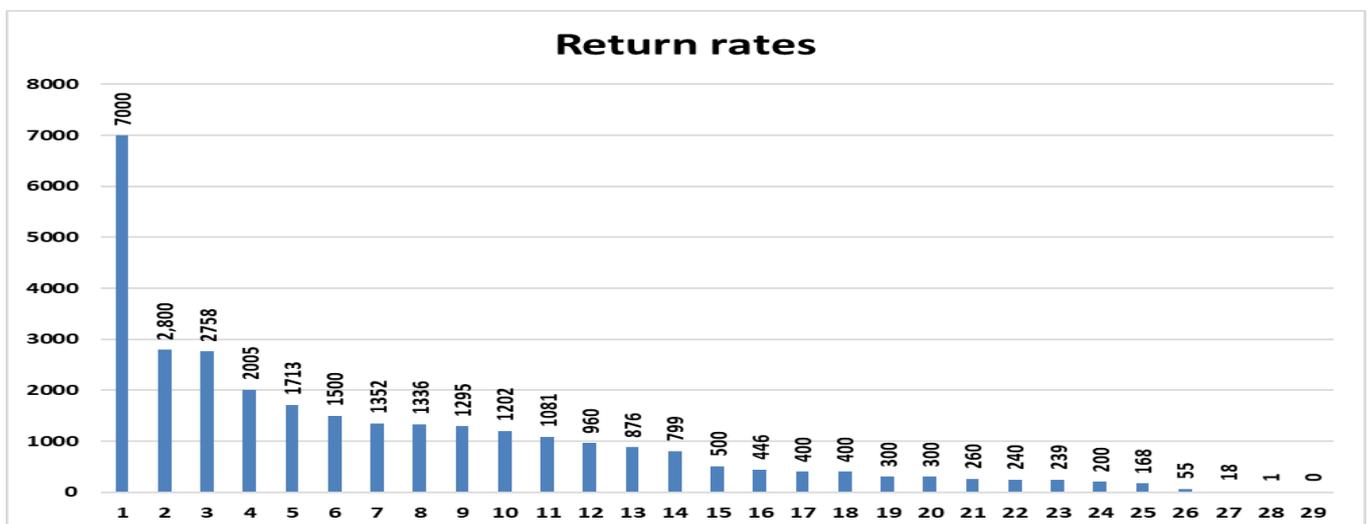
59% of FRSs advise weekly, with many opting for a multiple approach.

Annual orders vs return rates

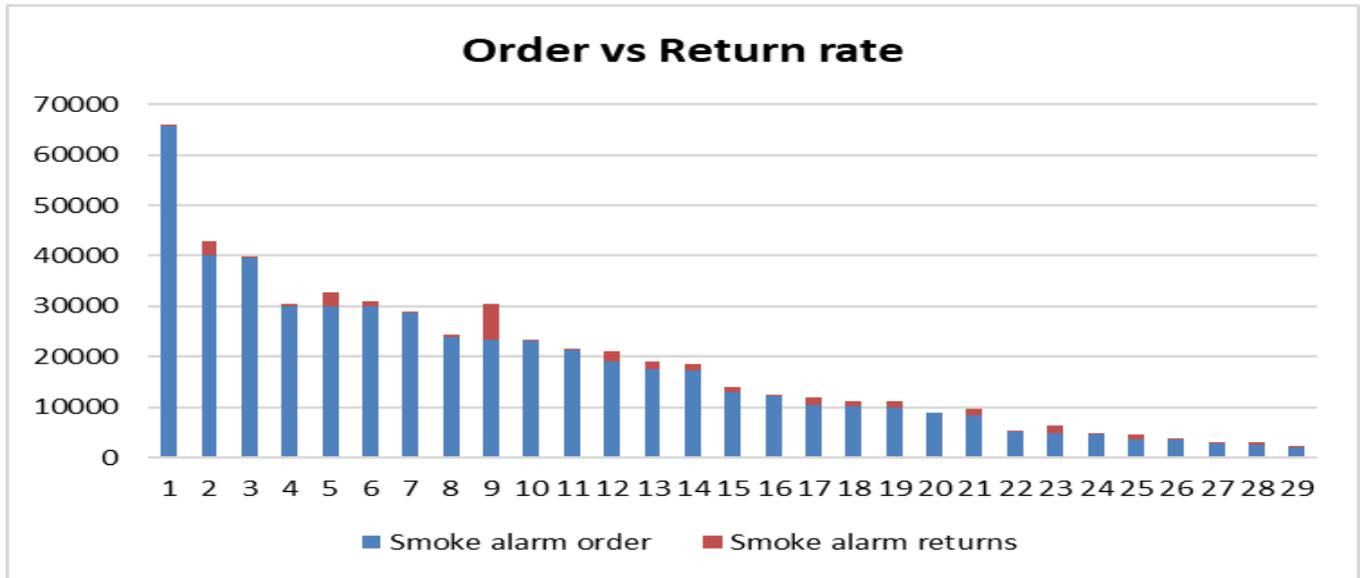
Annual smoke alarm order rates:



Return rates:



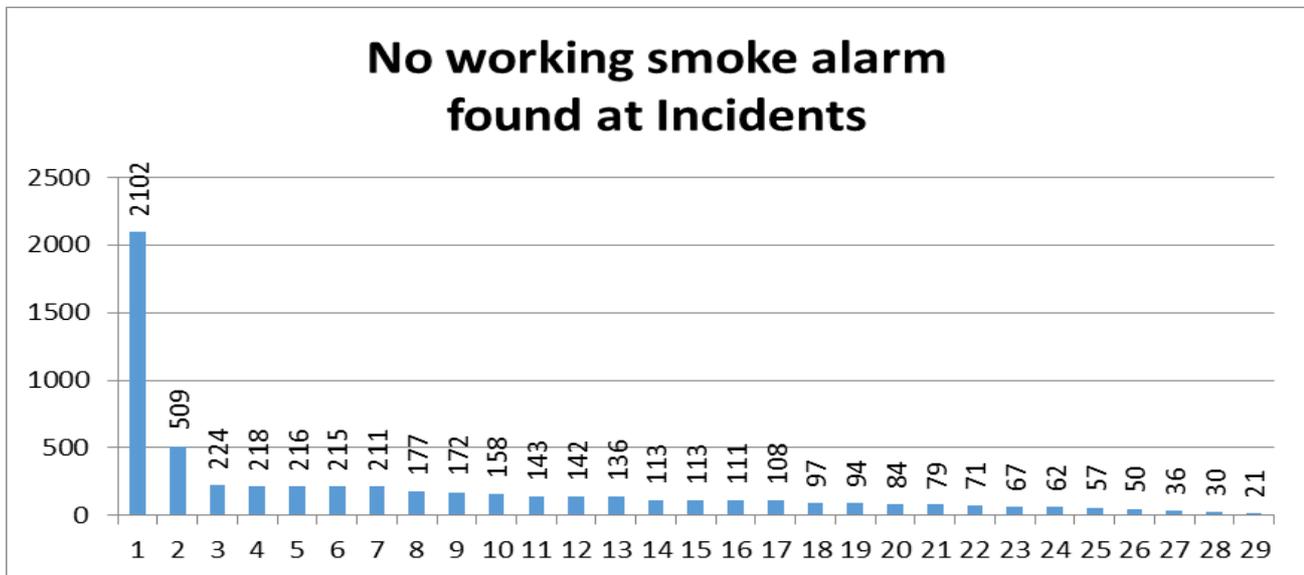
Orders vs Returns (Smoke alarms):

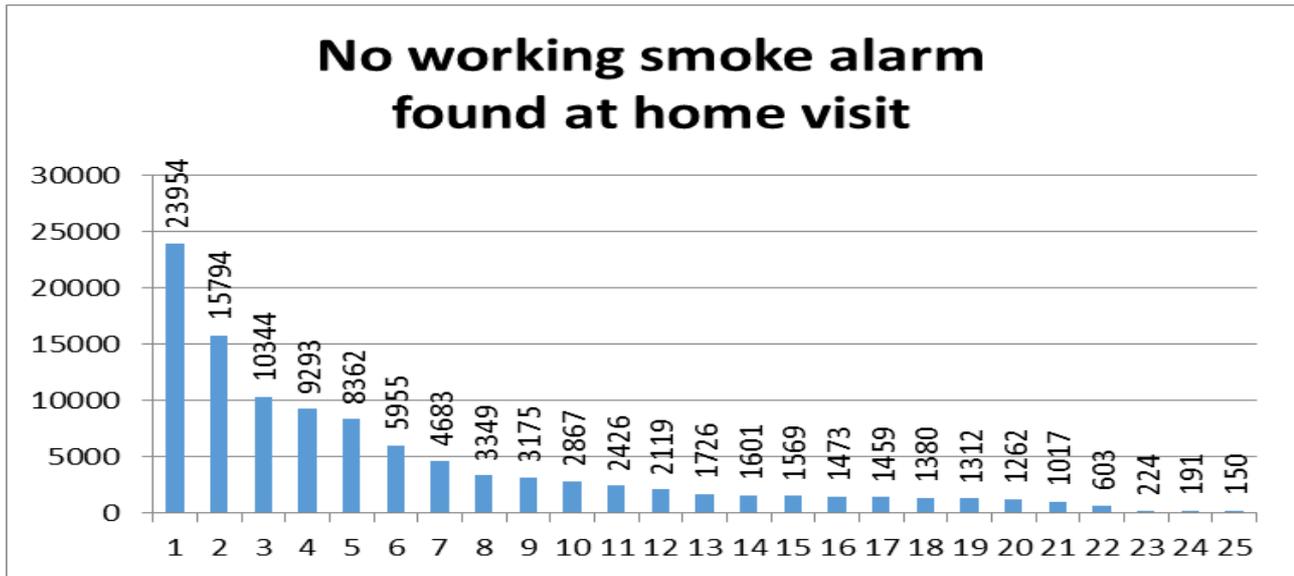


Using the Annual order and return rate figures, a percentage has been calculated to see the current picture. The return rates range from 0.3 % to 32%.

A question was asked with reference the fault rate to establish whether this matched the return rate. Unfortunately, there was not the quantity of returns to establish any trends or findings. As not all returns are tested by the supplier, it is difficult to understand a true figure.

Smoke alarm ownership found at incidents and home visits





Best Practice

There were areas highlighted of FRS collaboration around faulty alarms and several comments supporting frameworks for procurement of alarms. There were also examples of work with alarm manufacturers to develop future developments. Future developments will be picked up with the detection work stream under the Home Safety Committee.

Summary / Findings

There are many services that are fitting more than the standard two smoke alarms in properties they visit to keep people safe. This approach is also supported by a high level of agreement for the current position statement to fit a variety of detection based on the need and risk of the occupier(s). The advice currently being given around testing smoke alarms is predominately weekly, however there are many services using multiple bits of advice. It may be beneficial to use a statement that covers all angles to support a single message; *‘Always follow the manufacturers recommendations / guidance – our advice is to test your smoke alarm weekly with a minimum of monthly’*.

There is a wide spectrum around the quantity of smoke alarms being ordered, there is also a wide spectrum of returns. When this is overlapped, it is clear that the return rate is at a low percentage. However when discussed with the suppliers, the fail rate is a lot lower. There may be an opportunity to support and promote a clearer message around smoke alarm performance, internally and externally. This joined up understanding will also support if issues do arise with the alarms we fit and then promote a single message through the NFCC.

There was a varied number of households found not to have working smoke alarms following incidents and home visits. This will obviously depend on the total quantity of visits and incidents attended by each individual FRS; however, the total quantity suggests there is still work to be done to increase smoke alarm ownership.

There was some confusion around the question to understand households with at least one working smoke alarm and whether the alarm had been sited in the correct place. Many FRSs either could not answer the question due to not having the data or due to how the questions are asked in IRS.

There may be an opportunity to review the questions collected by FRSs to support the understanding of detection in the home.

Next Steps

- Work with smoke alarm suppliers to understand and communicate issues surrounding return / fault rates.
- Share the findings from this report with all FRSs.
- Issue a smoke alarm position statement.
- Identify areas for improvement around data collection questions.

Jim Bywater
Detection Lead NFCC