Presentation Title: Intelligence Led Fire Prevention

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I.   Formative Evaluation – Planning

Devon & Somerset Fire & Rescue Service (DSFRS) is one of the largest fire and rescue services (FRS) in the UK with 85 fire stations (with a mixture of Wholetime, Retained and Volunteer crewed appliances) spread across over 10,000km^2 of south west England. Like all UK FRS it has carried out prevention activity for a number of years. For the most part, until recently, this took the form of high volume low impact activity which generally only reached the "worried well" and was not the most effective or efficient use of resources. In 2011 DSFRS moved to an intelligence-led model for prevention activity. This new approach enabled us to improve the impact of risk reduction activities while reducing the number of interventions carried out from 16,000 home safety visits in 2009 to 4,000 in 2012.

The program aimed to identify those at highest risk of having an accidental dwelling fire within the communities of Devon and Somerset and the most effective methods of influencing them to reduce the level of risk. The target audience once defined would then benefit from greater fire safety awareness and a reduced likelihood of experiencing a fire.

II.   Process Evaluation – Implementation

In late 2010 we procured Mosaic Public Sector, a customer segmentation tool created by Experian Group. The Mosaic dataset classifies every household in the UK into 69 types and 16 Groups. Through this classification it is possible to access a range of lifestyle and behavioral information. By matching this data to where dwelling fires had occurred we were able to build up a clear picture of who is most likely to become the victim of fire.

This analysis identified a crucial risk group "Elderly People reliant on state support", who experience twice as many dwelling fires as average. The lifestyle information available to us through Mosaic enabled us to identify that this group prefers face-to-face contact; meaning a Home Safety Visit program is the optimal way of making this group safer.

III.   Impact Evaluation – Short Term Results

By reaching the most vulnerable people DSFRS has been able to reduce the volume of its home safety visits considerably from over 15,000 a year in 2010/11 to less than 4,000. Over this period accidental dwelling fires have continued to fall from 1072 in 2010/11 to 964 in 2012/13.

Due to a manufacturing fault with the smoke detectors fitted, DSFRS carried out a program of revisits during 2012 to more than 800 properties which had received a home safety visit in the prior 18 month period. This allowed DSFRS to further measure the impact of the home safety visits on households who receive them and showed that 84% of properties still had working smoke detection and a slightly higher proportion (85%) had an "in case of fire" escape plan.

IV.   Outcome Evaluation – Long Term Results

Through more in depth evaluation of the HSV program using the predictive models developed to target visits we can compare the rates of dwelling fires in those homes which receive a visit with those which don't. For all households receiving visits the annual rate of dwelling fires per 10,000 falls from 15.48 to 12.91 a fall of approximately 20%. However for the primary target group ("Elderly People reliant on state support") identified through the use of segmentation data the fall is considerably more dramatic with a reduction in the rate of dwelling fire from 30.41 without a home safety visit to 13.76 – a decrease of 55% which moves the rate for this high risk group from double the average rates back to a "normal" level.

Recommendations for others:

We have found that customer segmentation data is invaluable in understanding how those most at risk can be identified and influenced. This allows further refinement of how prevention activity can be targeted.

Another key lesson learned was using the data and intelligence available to understand the two levels of targeting; not just who is at risk but also how they can be influenced and made safer.

This increased level of evidence base through using this data has allowed us to make a robust case in supporting further investment (or continued investment) in prevention activity.

Conclusions:

Through using intelligence and especially customer segmentation data it is possible to maximize the impact of fire prevention activities by identifying those most at risk and targeting them with an appropriate intervention.