An evaluation of the Manchester Fire and Mental Health Liaison Project

A partnership between Manchester Mental Health and Social Care Trust and the Greater Manchester Fire and Rescue Service

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Contents

1. Introduction to the evaluation

This project is a two year collaboration between Manchester Mental Health and Social Care Trust (MMH&SCT) and Greater Manchester Fire and Rescue Service (GMFRS) for the period from March 2009 to March 2011. An Occupational Therapist was equally funded by both parties and recruited to the post of Fire and Mental Health Liaison Officer (FMHLO). This evaluation has considered the achieved measurable outcomes of the project in relation to its aims. Recommendations are also provided. The independent evaluation has been undertaken following discussions with Paula Breeze FMHLO and Warren Pickstone GMFRS who provided a narrative of the study and a range of documentation relating to the study.

2. Methods

A range of data was collated and analysed to measure outcomes of the project in relation to the 4 aims.
The data sources were:

1. Descriptive statistics and qualitative data collected from the fire service personnel who undertook mental health awareness training
2. Survey results collected via survey monkey from Trust personnel
3. Questionnaire data from service users
4. Chronological history of risk events sheet (CHORES)
5. Amigos data
6. Documentation related to home fire risk assessments (HFRA) collected by Paula Breeze
7. Case studies
8. Audio-taped narrative
9. Survey results collected from GMFRS personnel
10. Fire fatality statistics from GMFRS fire investigation team

3. Background to the project

Fire is costly in terms of life, injuries and damage to properties. The provisional total number of fire fatalities in England in 2009–10 was 328, five (1.5%) more than in 2008–09. This is 32% fewer than ten years previous (485 in 1999–2000) and 55% fewer than twenty five years earlier (726 in 1984–85).

The provisional number of fatalities in England in accidental dwelling fires in 2009–10 was 210, one higher than in 2008–09. This is 30% fewer than ten years previous (301 in 1999–2000) and 58% fewer than twenty five years earlier (497 in 1984–85).

In 2009–10, the number of non-fatal casualties in fires in England fell by 8% to 8,500 from 9,200 during 2008–09. This is 42% fewer than ten years previous (14,600 in 1999–2000) and 5% fewer than twenty five years earlier (9,000 in 1984–85).

Despite this fire continues to impose significant costs on the economy of England and Wales. In 2004, the total cost was estimated at £7.03bn, Equivalent to approximately 0.78% of the gross value added of the economy (a measure of total national output).The average cost of a domestic fire is estimated at £24,900, of which approximately £14,600 is accounted for by the economic cost of injuries and fatalities and £7,300 is due to property damage.

The majority of deaths result from fires caused accidentally with the leading cause of fire being the careless handling of fire/hot substances including the careless disposal of cigarettes (Fire Statistics UK). Statistics for the Northwest region list the fatalities at 8 per million population with 300 per million population involved in non-fatal fires, the majority of which are caused accidentally.

These statistics demonstrate the positive trend in the reduction of fire casualties but the cost to human life and the economy is still sufficient to support any action that may reduce this further – this project is one such action.

There is evidence that persons with a mental health problem are more at risk of fire due to a variety of reasons but there is very little hard evidence to support this. Some research has been completed but has tended to focus on deliberate fire setting within a forensic environment (Soothill 1990) and has tended to ignore the assessment of fire risk with this client group. Phelan and Fisher (1993) suggested a method of assessing and managing fire risk via assessment of individual and environment factors and a focus on behavior rather than diagnosis; this they felt could be readily done via activities of daily living assessment making this appropriate for the occupational therapist to complete. GMFRS identified that since 2000 30% of people killed by fire in Greater Manchester were known to mental health services.

The limitation of this evidence does have an impact on the outcome of this project as it is not possible to demonstrate before and after statistics to demonstrate the effectiveness or otherwise of this project on this group. It would be a positive move for GMFRS to collate data that allows links to be made to various target groups and death/injury statistics.

Two studies have shown that people with a mental illness are vulnerable to death in a residential fire and that a physical or cognitive impairment is an important predictor of the same, however without further study separating the physical and cognitive impairments these two variables will continue to be considered together.

In the Manchester District the average number of dwelling fires in a year is circa 450. National fire statistics suggest that only 20% of dwelling fires are reported therefore the likely number in a year is circa 2300.

If 30% of these fires are likely to involve individuals with mental health issues then the client group is circa 700 dwellings per year. The economic cost of fire for this group is therefore circa £7 million pounds per year in fire losses due to deaths, serious injuries and fires in the home.

The cost of this project is £48K per year over 2 years (including on costs); this was equally shared by the Trust and Fire service. This provides a clear context of the invest to save potential for this specialist partnership and post.
In the first 18 months of the project the FMHLO has had contact with a client group of approx 360 people and therefore it is likely that the FMHLO has seen less than 50% of the known potential client group. It must be recognised that with only one person in post, the lead in time for the project which would reduce the time available to receive referrals and see clients, a lack of data regarding this client group to enable direct targeting, and those clients who do not want to receive this service would all impact on the number of clients seen in a given period. That said this is a very healthy referral/intervention rate and given that following a number of publicity drives access to clients is increasing, management of this group will prove difficult with the current resources of one FMHLO.

4. Aims of the project

4.1 **Aim 1** was to improve the mental health knowledge and awareness within Greater Manchester Fire and Rescue Service. This was achieved via training sessions delivered to representatives from 5 watches from 7 stations across the borough. Two sessions for each watch colour were provided with each session attended by fire service personnel ranging from 9 to 22 attendees.

GMFRS is structured into the authorities of Bury, Bolton, Manchester Oldham, Rochdale, Salford, Tameside, Trafford and Wigan. The service is the largest outside London with over 2500 members of staff and 41 fire stations. Mental health awareness training was provided to 246 fire fighters and fire service personnel across the Manchester borough.

The training provided was targeted to Manchester borough only which equates to approximately 10% of the fire service personnel. Feedback from the personnel trained was qualitatively evaluated and was very positive with 91% of the participants agreeing that the training was useful and their knowledge of mental health and illness had increased. Whilst not all personnel would require this training for their role the percentage of personnel trained and the outcome does suggest that training of more personnel would be beneficial.

The themes that derived from the qualitative data can be placed into 5 areas – statements from the data have been included to illustrate the theme.

Extend the service:
'This should be put to all the boroughs of GMFRS.'
'Boroughs not on board with this – they should be.'
Time:
'Will save time if help and advice needed in future-good to have a point of contact.'
'Make the event longer and in the day time.'
'Should be done on day shifts.'
CPD:
'Recordable for CPD on the Chris system'
'Good to have input as it is a regular occurrence at OP's, incidents and HFRA's
Inclusion of service user in session:
'It was good to have the talk from G who has managed mental illness first hand.'
'Would like more time with the service user for questions and answers.'
Presentation:
'Very well presented.'
'Very good and informative.'
'Maybe visual aids to demonstrate behaviours.'

A further outcome used to measure the efficacy of the training was the number of referrals made by GMFRS to the FMHLO. The total number of referrals to date is 468 this is the total number of referrals and they are not all from GMFRS. GMFRS have referred 151 as at the end of Dec 2010 with a greater percentage coming from 2 areas – the community fire service department and Moss Side fire station. It has not been possible to ascertain if the Moss Side area is one that has a greater percentage of its population with mental health needs and therefore could suggest one reason for the greater number of referrals.

Data from AMIGOS* illustrates the geographical location of those clients referred to the service and known to mental health services – this data shows that clients in the areas of Baguley, Crumpsall, Moss Side, Rusholme and Sharston had the highest number of referrals to the service. GMFRS referred 83 clients from these areas. Given the data above, this means that GMFRS referred 68 clients that were not known to the service, suggesting an increase in their awareness of the needs of clients with mental health needs. Conversely, the statistics could indicate that GMFRS were referring people who may not have had mental health need but who were considered at risk for other reasons, for example physical health problems or housing issues.

The project was evaluated using an electronic survey which was sent out to GMFRS personnel in the Manchester borough. The survey was sent out at the end of the project to obtain views and perceptions of the FMHLO project. 10 questions were asked and the final question was open ended.

The following tables provide details of the questions and the responses given. The comments in the shaded boxes are those provided in response to question 10. For details of all the comments please see appendices.

*AMIGOS *is MMH&SCT electronic records system.*

4.1.2 Results of Survey (GMFRS)

Question 1

Please select your job type.		
Answer Options	**Response Percent**	**Response Count**
Borough Commander	0	0
Station Commander	13%	8
Fire Investigation Officer	8%	5
Community Fire Safety Officer	3%	2
Fire Safety Enforcement Officer	8%	5
Watch Manager	26%	16
Crew Manager	22%	13
Fire Fighter	7%	4
Community Safety Support Officer	5%	3
Clerical/administrative role	8%	5
answered question	100%	61
skipped question	0	0

Comments: The highest number of responses were provided by operational fire crews, however the survey indicates that other departments within GMFRS also utilized the skills of the FMHLO e.g. Fire Investigation and Fire Safety Enforcement. This suggests that collaborative working with mental health services is relevant throughout the organization and not just for operational fire fighters.

Question 2

Please select your usual place of work		
Answer Options	Response Percent	Response Count
Moss Side Fire Station	15%	9
Withington Fire Station	8%	5
Wythenshawe Fire Station	8%	5
Phillips Park Fire Station	7%	4
Central Fire Station	13%	8
Blackley Fire Station	8%	5
Gorton Fire Station	12%	7
Manchester Borough Headquarters	20%	12
GMFRS Headquarters	0%	0
Fire Investigation Team	8%	5
Other (Salford borough)	1%	1
answered question	100%	61
skipped question	0	0

Question 3

Prior to receiving this questionnaire were you aware that there is a Fire and Mental Health Liaison Officer working for your organisation?		
	Response Percent	Response Count
Yes	100%	61
No	0%	0
answered question	100%	61
skipped question	0	0

Comments: Highly significant response – shows that FMHLO successful in making others aware of her role

Question 4

Did you attend the Mental Health Awareness Training carried out by the Fire and Mental Health Liaison Officer?		
	Response Percent	Response Count
Yes	64%	39
No	36%	22
answered question	100%	61
skipped question	0	0

Comments: Whilst a significant number of staff did attend the training (64%) 36% did not. Some reasons given were that staff did not know about it, were not on duty at the time, were busy dealing with operational incidents or the training was not relevant to their role (e.g. clerical role).

Question 5

Have you made contact with the Fire and Mental Health Liaison Officer for advice or to make a referral?	Response Percent	Response Count
Yes	82%	50
No	15%	9
"I do not know what the Fire and Mental Health Liaison Officer does"	1.5%	1
Other	1.5%	1
answered question	100%	61
skipped question	0	0

Comments: Highly significant response with 82% of respondents having utilized the resource of the FMHLO

Question 6

Please rate how easy it was to get in touch with the Fire and Mental Health Liaison Officer?	Response Percent	Response Count
Easy to get in touch	74%	45
Able to get in touch	16%	10
Not very easy to get in touch	0%	0
Not able to get in touch	3%	2
answered question	93%	57
skipped question	7%	4

Comments: Highly significant response, 90% of respondents felt that they were able to get in touch with the FMHLO if they needed to.

Question 7

If you have worked with the Fire and Mental Health Liaison Officer please rate your overall level of satisfaction with the service provided	Response Percent	Response Count
Very satisfied	64%	39
Satisfied	15%	9
Not satisfied	3%	2
Not at all satisfied	0%	0
answered question	82%	50
skipped question	18%	11

Comments: 79% of respondents were satisfied with the service provided by the FMHLO.

Question 8

Please rate whether you were satisfied with the feedback you received from the Fire and Mental Health Liaison Officer about your referral(s)		
Answer Options	**Response Percent**	**Response Count**
Very satisfied with feedback	57%	35
Satisfied with feedback	18%	11
Feedback OK	5%	3
Not satisfied with feedback	0%	0
No feedback given	3%	2
answered question	84%	51
skipped question	16%	10

Comments: 75% were satisfied with the feedback provided by the FMHLO regarding cases referred. 16% of respondents skipped this question therefore it cannot be assumed that all of the remaining 25% of respondents were not satisfied.

Question 9

Please indicate what you find useful about the role of Fire and Mental Health Liaison Officer (tick those that are relevant)		
Answer Options	**Response Percent**	**Response Count**
Being able to refer to a mental health specialist when I come across cases I am worried about	90%	55
Having someone to ask for advice and support	0%	0
My own knowledge and understanding of mental health has increased	54%	33
Providing access to people the fire service would usually have difficulty engaging with	59%	36
Looking at how the person's behaviour, illness, activities and environment come together to cause fire	52%	32
Coordination of joint home fire risk assessments with mental health staff	54%	33
Carrying out home fire risk assessments for people with complex needs	64%	39
Alerting the fire service to fire risks that they did not know about	61%	37
Collating information about fire related incidents	38%	23
Engaging with clients that are difficult to work with	54%	33
Access to expertise in mental health	72%	44
Contribution to multi disciplinary/agency meetings to ensure that fire risk is considered	43%	26
Liaising with Mental Health Trust on behalf of the fire service	44%	27
Sharing information about fire incidents	48%	29
Support to manage fire risk for people with complex needs	70%	43
Education around mental health	62%	38

Comments: The response to this question suggests that GMFRS staff valued the FMHLO service for a variety of reasons. The most common reasons stated were that they were able to refer to a mental health specialist when they came across cases they were worried about (90%), that they had access to expertise in mental health (72%), and that they had support to manage fire risk for people with complex needs (70%)

Question 10
In your opinion what else would help you in working with people with mental health needs?

'' The service provided by the FMHLO is first class, she has assisted myself with many difficult cases of persons suffering mental health illnesses. Without this contact the follow up actions in support of the person would not be as effective''

''Regular training and meetings with the FMHLO & any other support staff. Received one session per watch in last 2 years''.

''The FMHLO is exceptionally good in her role. On numerous times in the last two years I have called on her assistance and there has never been a time that I have had unanswered questions. The work which she does is an excellent support tool for Watch Officers to utilise in the everyday encounter of people with mental health issues and fire related incidents''

''We need the whole of GMFRS to be covered not just a couple of boroughs''

4.2 **Aim 2** was to improve fire safety awareness and risk management strategies within MMHSC Trust.

MMHSCT is the partner institution for the project and the employer of the Fire and Mental Health Liaison Officer. Fire awareness and home risk assessment training has been carried out with 5 occupational therapy staff within the trust and 10 from social services– this equates to 6.5% of the Trust OT staff with further training of other mental health staff planned for the future. 8 occupational therapists working with clients in later life have also been trained.

Whilst specific training was provided to a number of staff, the project as a whole and the availability of the service was publicised to a wide range of staff. To evaluate the success of this publicity and to gain feedback on staff experience of using the service data was collected via survey monkey.
299 responses to survey monkey were collated. 10 questions in total were posed with question 10 being open ended. The results are presented with comments highlighted by the responses listed below each relevant question.

4.2.1 Results of Survey (MMH&SCT)

Question 1

Please select your job type.		
Answer Options	**Response Percent**	**Response Count**
Consultant	6.7%	15
Doctor	0.4%	1
Team manager/leader	10.3%	23
Ward manager	2.2%	5
Psychologist	8.5%	19
Specialist practitioner	2.2%	5
Nurse	37.7%	84
Occupational Therapist	9.4%	21
Social Worker	6.3%	14
Trainee Assistant Practitioner	1.3%	3
Assistant Practitioner	0.0%	0
Support worker	13.5%	30
Housing worker	1.3%	3
Other (please specify)		74
answered question		223
skipped question		76

Comments: It would be useful to know the profession of the team leader/support worker to ascertain the effectiveness of the training to date

Question 2

Please indicate the type of service where you work.		
Answer Options	**Response Percent**	**Response Count**
Inpatient	30.9%	72
Community:	41.6%	97
CRHT	4.3%	10
AOT	3.4%	8
CMHT	18.0%	42
Housing/tenancy related	0.4%	1
Occupational/vocational	1.3%	3
Other (please specify)		68
answered question		233
skipped question		66

Comments: Missing data could be significant as totals 22% of responses

Question 3

Please indicate the client group you work with.		
Answer Options	**Response Percent**	**Response Count**
Adult Care Group	59.8%	156
Later Life Care Group	24.5%	64
Social Inclusion Care Group	6.1%	16
Psychological Therapies Care Group	9.6%	25
Other (please specify)		36
answered question		261
skipped question		38

Comments: 12.8% did not respond to this question.
What areas are covered by other which equates to 12%. How does this relate to MH clients and this project?

Question 4

Prior to receiving this questionnaire were you aware that there is a Fire and Mental Health Liaison Officer working for your organisation?		
Answer Options	**Response Percent**	**Response Count**
Yes	72.5%	216
No	27.5%	82
answered question		298
skipped question		1

Comments: Highly significant response – shows that FMHLO successful in making others aware of her role

Question 5

Have you made contact with the Fire and Mental Health Liaison Officer for advice or to make a referral?		
Answer Options	**Response Percent**	**Response Count**
Yes (Please go straight to question 7)	43.2%	73
No	56.8%	96
answered question		169
skipped question		130

Comments: 43.5% did not respond to this question which is a significant number – cannot assume it was because did not know of role or not used FMHLO

Question 6

If No please select your reason(s) from the options below:		
Answer Options	**Response Percent**	**Response Count**
No clients presenting with fire risk	61.3%	46 *
I am able to manage the risks identified	9.3%	7
I would contact the fire service directly if I needed advice	22.7%	17 **
I do not know how to make a referral	17.3%	13
I do not know when to make a referral	6.7%	5
Other (please specify)		23
	answered question	**75**
	skipped question	**224**

Comments: * - would be useful to know if these professionals had been given training
** difficult to ascertain if any evidence that this happened before the project as response suggests it would have occurred.

Question 7

Please rate your overall satisfaction with the service provided if you have worked with:

Answer Options	Very satisfied	Reasonably satisfied	Fairly satisfied
The Fire and Mental Health Liaison Officer	62	19	6
A representative from the fire service	34	17	6

Not satisfied	Not at all satisfied	Not worked with anyone from this service	Rating Average	Response Count
0	1	56	3.19	144
0	0	69	3.97	126

Comments: 72% of respondents satisfied with the service provided by FMHLO and 59.6% satisfied with the fire service.

Question 8

Please rate how easy it was to

	Easy to get in touch	Able to get in touch	Fairly easy to get in touch
Make a referral to the Fire and Mental Health Liaison Officer?	64	20	12
Not very easy to get in touch	Not able to get in touch	Rating Average	Response Count
2	6	1.71	104

Comments: 80.7% felt that they were able to get in touch with FMHLO suggesting FMHLO is readily accessible.

Question 9

In your opinion has the involvement of the Fire and Mental Health Liaison service contributed to fire risk reduction for your client(s)?

Answer Options	Response Percent	Response Count
Yes	55.7%	78
No	7.1%	10
Unsure	37.1%	52 *
	answered question	140
	skipped question	159

Comments: * this response suggests may need to close the communication loop

Question 10

Please indicate the things that you find useful about the Fire and Mental Health Liaison service		
Answer Options	**Response Percent**	**Response Count**
Coordination of a joint home fire risk assessment	73.1%	98
Carrying out home fire risk assessments for people with complex needs	79.1%	106
Being able to manage risky behaviour and risky activities as well as routine fire interventions	57.5%	77
Looking at how the persons behaviour, illness, activities and environment come together to cause fire	61.2%	82
Provision of fire safety equipment (eg smoke alarms, bedding, sofa throw)	72.4%	97
Collating information about fire related incidents	44.8%	60
Engaging with clients difficult to work with on issues around fire risk	51.5%	69
Access to expertise around fire risk management	68.7%	92
Support with formulating risk assessment and decision making around accommodation	53.0%	71
Contribution to multi disciplinary/agency meetings to ensure fire risk is considered	47.0%	63
Liaising with the fire service on behalf of the Trust	58.2%	78
Sharing information about fire incidents	44.0%	59
Support to manage complex risks	54.5%	73
Education around fire risk	65.7%	88
Other (please specify)		13
answered question		134
skipped question		165

Qualitative data: Of the 73 who said they had used the service of the FMHLO 51 gave qualitative responses (69.8%). Of the entire responses only one considered the service unnecessary, all other responses related to positive feedback of the service offered, a desire for increased promotion/publicity of the service and to widen the training on offer. This appears to be a very positive evaluation of the service from members of the trust.

As can be seen from comments after specific questions there is some data that would have been useful to have to give further support to responses but this does not appear to be available. The collection of this data could be a useful adjunct to this project.

4.3 **Aim 3** was to increase the number of high risk and vulnerable people who have Home Fire Risk Assessments.
Prior to this project the number of home fire risk assessments carried out by the fire service is difficult to determine. Data suggests that 70,000 home fire risk assessments were carried out in 2009/10(www.manchesterfire.gov.uk) with the installation of smoke alarms now reaching 100,000. Furthermore it is difficult to determine the range of risk identified and the level of complex cases that require ongoing support. This would be very useful data to collate as not only would it help to illustrate the cost effectiveness of the project but also when compared to data regarding home fires, injuries and deaths it may demonstrate variables that contribute to a change in these areas.

It can be seen that the FMHLO has reduced risk via interventions as documented via risk assessment reports (see Appendix 1). This is one example of the evidence found to support the achievement of this aim. Others include examples of previous contact by the GMFS to duty social workers following fire incidents but the fire risks were not resolved; the situation in all cases was greatly improved when the FMHLO became involved.

Within the Trust any service user who presents with any level of fire risk are automatically brought to the attention of the FMHLO if an incident report has been completed. The FMHLO is often the first person to find out about fire incidents following communication with GMFRS. The risk related to the service user is then documented on the Chronological History of Risk Events sheet on the person's risk assessment (CHORES). To date the FMHLO has completed CHORES on 112 occasions. This information allows all health personnel to be aware of the risk presented by the service user and can monitor or respond to a situation accordingly. This can only contribute to the safety of people with mental health needs.

Since the commencement of the project the FMHLO has received 493 referrals with approx 109 of these not known to mental health services. All clients were followed up by the FMHLO and received a coordinated and holistic fire safety intervention. The FMHLO also liaised with other agencies, mainly the Directorate for Adult Services or Housing to ensure a continuity of care. It is clear from this number of referrals that there are a significant number of people vulnerable to fire risk known to other agencies particularly in the area of social care. It is crucial that links between agencies are made to ensure the best service for these clients.

One example of an initiative to develop these links was the placement of two Occupational Therapy students on their role emerging placement placed within the Directorate for Adults team (short term and Ardwick Connect team). They developed links with the fire service and developed a referral pathway so that these teams could refer easily to the local fire service.

Additionally the fire service has recorded a total of 191 completed jobs that have involved the FMHLO.

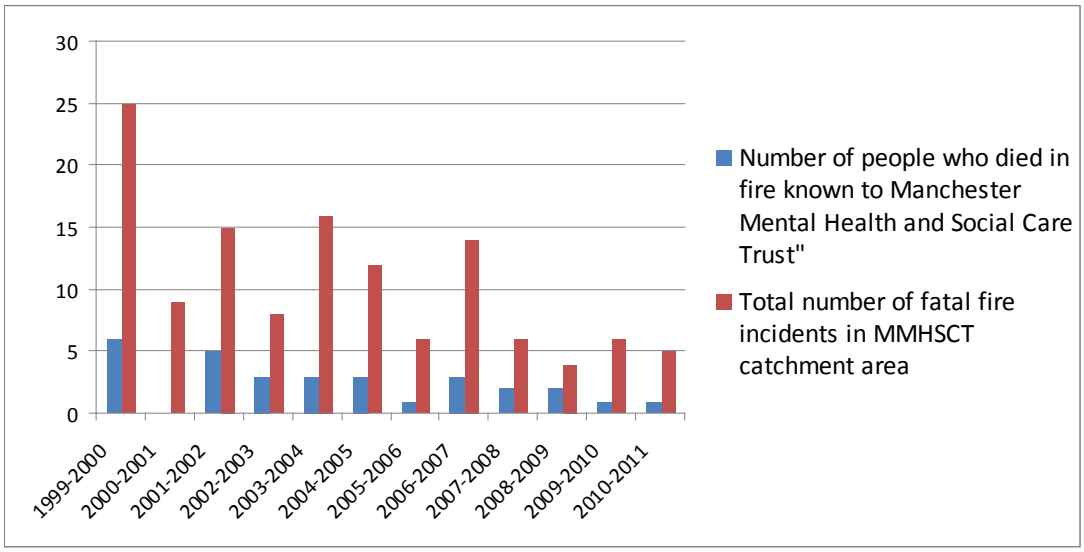
It has been difficult to collate the number and type of referrals that involve the GMFRS and the FMHLO. Whilst staff have been helpful in trying to provide data what is clear is that the type of data needed to illustrate specific outcomes of this project is not collected. Clearly the fire service collect a large amount of data but it is unfortunate that data collection specifics were not implemented at the beginning of the project to enable outcomes to be readily measured in a meaningful way.

Overall this was a difficult aim to measure in a meaningful way but it is clear it has achieved positive outcomes.

4.4 **Aim 4** was to improve the safety of people with mental health needs in Greater Manchester by providing person centred fire safety assessment and intervention.

In Greater Manchester 12 people died in what are considered 'preventable' fire related incidents between April 1st 2009 and 31st March 2010 compared to the same period in 2007/08 when there were 18 fatalities. Despite the successes of recent years in reductions in fire related deaths, GMFRS are still experiencing fatal fires involving certain 'hard to reach' groups. The factors associated with fire are well documented and include a range of lifestyle choices including the use of drugs, alcohol and smoking; living alone and having a physical/mental disability are also contributing factors. Findings from fire investigation also indicate that people who die in fires are often likely to be known to social services or mental health Trusts. One or more of the above high risk factors were present in approximately 89% of fatal fire incidents (2007/08).

It is clear from the statistics presented in this report that effective person centred FSA and interventions have been provided but it is not possible to demonstrate if these interventions have had a direct impact on the number of fatal fire related incidents. However, there has been a reduction in the numbers of fire fatalities in people known to MMHSCT during the period of the FMHLO project, when compared with previous years. The table below identifies that there was one fatality each year of the project known to MMHSCT. In the two years previously there were 2 deaths each year (refer to table above). Details of how the data was collated can be found in the appendices.



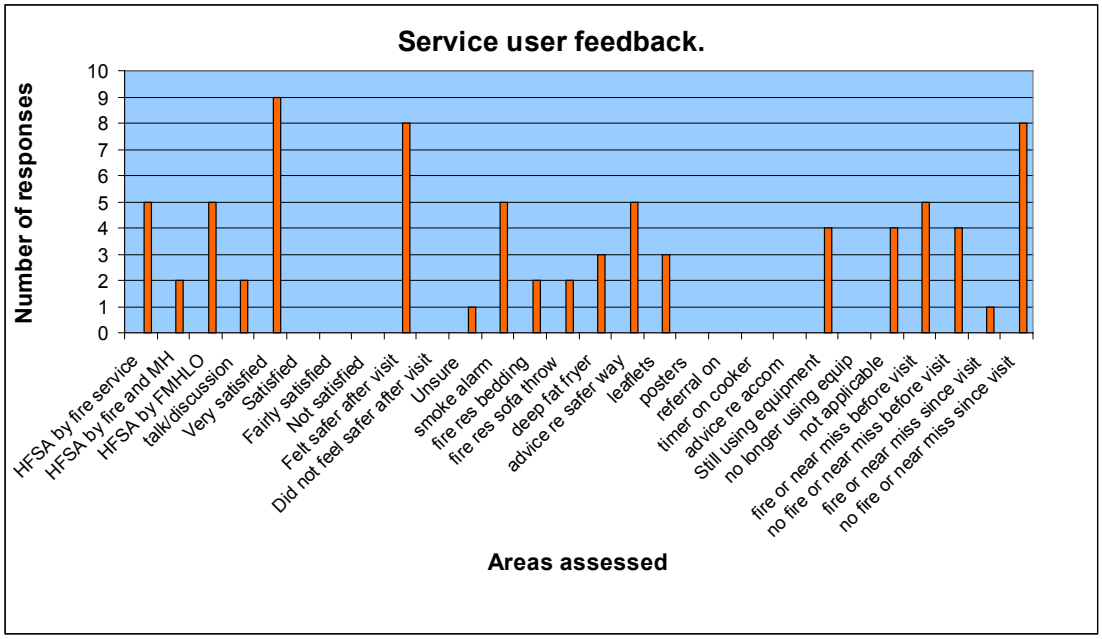
Despite this data it would be difficult (due to the way in which data is collated) to show direct cause and effect. Consequently to evaluate if this aim has been achieved with the data available we need to consider if risk has been reduced as this could correlate to an improvement of safety.

The FMHLO is an Occupational Therapist and as such uses core Occupational Therapy skills to assess a person in relation to their environment, activities of daily living and risk of fire. Following the assessment and intervention a risk management report is completed which provides recommended control measures and risk management plan. An anonymised example of one such plan can be seen below (see Appendix 1); it can be seen that the risk associated with this client has been changed from 2 (reasonably probable, probably will occur in time) to 3 (remote, may occur in time).
A wide range of interventions has been completed by the FMHLO over the course of the project. Consideration of documentation and data demonstrates that the role is much more than liaison.
To date the FMHLO has completed 369 fire safety interventions and 155 HFRA.

The HFRA have been completed in many instances in collaboration with a community safety support worker and the individual's care coordinator. As can be seen from the service user feedback (see graph below) the FMHLO is not always present at the assessment but without data from a number of different staff it is not possible to provide a total for this. However in terms of this aim of the project it is clear that this has been achieved to good effect. This partnership working enables a number of key benefits for clients. Collaboration between a range of professionals allows the client access to an increased skill set, they are supported by people who are known to them and they gain ongoing support if required. Clients have provided feedback on the service provided by the FMHLO, fire service and/or MH staff. The numbers providing feedback are very small in relation to the number of referrals completed but the outcomes are very positive.

It can be seen that 55.9% of service users had a fire or near miss prior to the assessment which was reduced to 11% after intervention. Whilst these figures need to be viewed cautiously from a research perspective if this positive trend is extrapolated financially the worth of this project and the FMHLO post is confirmed.

Graph to demonstrate service user feedback following HFRA.



5. Further Outcomes

The NHS White paper Equity and Excellence: Liberating the NHS is a government policy document that sets out the long term vision for the future of the NHS. One aspect in this document is the quality agenda that aims to support staff nationally and locally to improve the quality of patient care while making efficiency savings that can be reinvested in the service to deliver year on year quality improvements. Quality, Innovation, Productivity and Prevention (QIPP) addresses the quality and productivity challenge and is engaging large numbers of NHS staff to lead and support change. Currently 5 pathways have been commissioned which are safe care, right care, long term conditions, urgent and emergency care and end of life care.

This project meets the demands of QIPP and is recommended that it be used to illustrate good practice in this area. This is an innovative project that has achieved publicity locally and nationally and as such is being introduced in a similar format in one area of Wales.

The evaluation of the project addresses the areas of QIPP and suggests positive outcomes in all areas. The quality of the project is clear in terms of its achievement of its aims, feedback from staff and service users and the development of a range of documentation tools and outcome measures. It is an innovative project that has inspired other areas in the country to implement. The productivity and prevention is clear to measure it relation to its outcomes; an increased number of clients have received fire risk assessments and relevant interventions and the outcome of these interventions can be seen in the case study examples (See Appendix 2).

The project has achieved national recognition via the following awards:

- National Patient Safety Awards (highly commended)
- Trustech Innovation Awards (second place)

It has also been recognised in a range of publications including OT News (national publication), In the Loop (local publication), Manchester Mental Health and Social Care Trust Newsletter (local publication) and GMFRS Performance Plan (local publication).

A paper presentation detailing the outcomes of the project at an interim stage was also presented at the National College of Occupational Therapy Conference 2010 in Brighton and the College of Occupational Therapy Specialist Section Mental Health Conference 2010.

Collaboration between occupational therapy and the fire service is a key outcome of this project. Both professions have provided a service to people with mental health problems but for the fire service this has tended to be more reactive. The input of occupational therapy to the training for fire fighters and the collaboration in the assessment of need of this particular client group has enabled the GMFRS to operationalise their commitment to reducing fire deaths and injuries.

GMFRS acknowledged that it recognised the need to work in partnership with other agencies – this project has enabled this partnership and the subsequent outcomes. Alongside the collaboration between these two agencies the FMHLO has facilitated links between the fire service and other agencies including GP's, social services and housing providers.

Occupational therapy provides an holistic assessment of need and intervention and this project has demonstrated the worth of this professional intervention. Clear outcomes have been demonstrated in relation to the 4 aims of the project but additional to these are the benefits of occupational therapy intervention to the client group. Occupational therapists utilize a range of assessments, interventions and skills within a theoretical framework or model of practice.

The model of human occupation (MOHO) (Kielhofner 2008) is one such model that enables the therapist to analyse the person, environment and occupation in relation to fire risk. Analysis of function, risk, environmental adaptation and outcome, person-centred intervention and strengths and needs are all part of the added benefit of occupational therapy intervention (see Appendices 2, 3).

6. Summary of outcomes

1. Successful collaboration between health and fire services.
2. Added benefit of occupational therapy intervention with this client group alongside the measurable fire preventions.
3. The invest to save potential for this specialist partnership and post are clearly measured.
4. FMHLO has seen <50% of the known potential client group over the project period suggesting there is still a great need for this post/service in this area alone.
5. 91% of fire personnel agreed that mental health awareness training was useful and their knowledge of mental health and illness and increased.
6. MMHSCT have been notified of more people who present with a fire risk than they had done prior to the project
7. An increase in the referrals by GMFRS demonstrates an increased awareness of needs of this client group

8. Fire assessment and HFRA training carried out with a range of staff from the Trust and social services.
9. Survey data completed by Trust staff and GMFRS staff confirmed the positive impact of the FMHLO for clients , staff and the organisations as a whole
10. HFRA have been provided to high risk and vulnerable people.
11. Any service user who presents with any level of fire risk are automatically brought to the attention of FMHLO via the Trusts incident reporting system.
12. Completion of CHORES database informs all health personnel of the risk to service users.
13. Links with other agencies have been made that ensure continuity of care for clients not known to mental health services.
14. It is not possible to demonstrate cause and effect from the project in relation to fire deaths.
15. Documentation of assessment and intervention demonstrates associated risk is reduced.
16. Collaboration between a range of professionals allows the client access to an increased skill set which is beneficial to the service provided.
17. 55.9% of service users had a fire or near miss prior to the assessment which was reduced to 11% after intervention

7. Recommendations

1. The collaboration between health and fire services has facilitated the reduction in some barriers for professionals working in this area (particularly the fire service) and this collaboration should be developed across the Manchester boroughs.
2. Ensure that the aims and outcomes demonstrated here are visible strategic targets within the services.
3. Extend case data collection to include details re deaths and injuries to allow clear outcome measurement of targeted interventions.

4. Extend mental health awareness training to other fire service boroughs.

5. Consider the areas of missing data in the Trust survey as further targeted data collection may provide further outcome measures.

6. Collate fire service data that highlights level of risk and any ongoing support required for complex cases. This demonstrates the efficacy of intervention by all parties and if targeted intervention is required.

7. Continue and widen links with other agencies (social services etc) to share information regarding clients at risk of fire and provide access to FMHLO service.

8. Share good practice via QIPP networks.

8. References and other sources

Kielhofner G (2008). *Model of human occupation: theory and application*. 4th Ed. Baltimore: Lippincott, Williams and Wilkins

Phelan M and Fisher N (1993) Fire risk: assessment and management in long term psychiatric patients. *Psychiatric Bulletin* 17, 86-88

Soothill K (1990) Arson in *Principles and Practice of Forensic Psychiatry*. London: Churchill Livingstone

www.communities.gov.uk/fire/researchandstatistics/firestatistics/firestatisticsuk/

www.manchesterfire.gov.uk

9. Appendices

Appendix 1

Occupational Therapist: Fire and Mental Health Liaison Officer
Fire Risk Management Report

Name:
D.O.B:

Reason for Involvement
F was referred to the Fire and Mental Health Liaison Officer by an Occupational Therapist on Oxford Ward, MRI because he has a history of setting fires.

Period of Involvement
From 29th October 2009 to the present day

Interventions carried out by the Fire and Mental Health Liaison Officer:

- 1:1 conversations with F
- Ward round attendance
- Contribution to multi-disciplinary discussion around fire risk and risk management
- Liaison with care coordinator
- Compiled chronological history of fire incidents
- Planned visit to F's flat with fire investigation team to assess fire damage (20.01.10)
- Visited Nursing Home to assess suitability

Purpose of Report: This report aims to identify F's risk of fire and to make recommendations about how this risk may be managed once he is discharged from hospital.

Previous fire history
F has a history of setting fires dating back to 1977. In the past F has set fire to himself, bins, clothes and his flat. He has also used cigarettes to self harm when he is distressed, and has made threats to burn others. The Fire and Mental Health Liaison Officer carried out a search of F's clinical records in December 2009 and the reported fire incidents and threats dating from 1977 to the present day are now documented on CHORES (chronological history of risk events located on Amigos electronic records).

Early warning signs/relapse indicators
It is documented that there are a number of relapse indicators and warning signs which place F at increased risk of setting fires. Please refer to F's CPA reports for further details. Some of the main triggers include:

- Expressing religious ideas, for example the belief that he will not come to any harm because of God's will
- Use of alcohol
- Breakdown of relationships
- Sleeping in the car
- Playing loud music
- Grandiose ideas regarding Japan

Fire risk management plan

F is currently an inpatient and as part of the discharge planning process a fire risk management plan around accommodation has been developed. The risk management plan is outlined below.

Activity/ procedure/ hazardous materials	**Significant risks**	**Persons at risk**	**Recommended control measures**	**Risks controlled? Yes or No If No fill in last column**	**Risk Severity**	**Risk probability**	**Total score**	**Action to be taken/ recommended**
Discharge from hospital to supported accommodation	Risk of setting fires	F, other residents and staff	**Person factors** 1) F will have access to a named person each shift whom he can access for support. 2) Refer to care plans regarding monitoring of mental and physical health 3) Refer to crisis management plan for management of emergencies	The risk management plan aims to manage the risk of fire. However, it is not possible to fully eliminate the risk if F is living in the community.	1	3	3	
			Environmental factors 1) Access to staff 24 hours (with mental health experience) 2) Single occupancy bedroom 3) Bedroom is located so that it is easily accessible and monitored by staff 4) Rooms are self contained and meet fire safety regulations					Accommodation options should meet the criteria outlined in the control measures section of this risk management form

			5) Provision of hard wired smoke detection system including one in bedroom 6) Doors are fire resistant and self closing 7) Fire retardant bedding and chair throw to be provided 8) There is adequate means of escape including fire exits and emergency lighting 9) Regular spontaneous evacuation drills take place and are recorded 10) Fire risk assessment and staff training records are available					Fire and Mental Health Liaison Officer to carry out an assessment of fire risk of all potentially suitable accommodation Fire and Mental Health Liaison Officer to provide fire retardant bedding and sofa/chair throw.
			Occupational factors 1) Provision of adequate facilities to smoke 2) Meals to be provided 3) Access to activities and meaningful occupations 4) Location of accommodation facilitates access to chosen occupations 5) See care plans for medication management					

Risk Severity key
1. Catastrophe – imminent danger exists, hazard capable or causing death and illness
2. Critical Hazard – hazard can result in severe injury, serious illness, property and equipment damage
3. Marginal – hazard can cause injury, illness or equipment damage, not expected to be serious
4. Negligible – hazard will not result in serious injury or illness, remote possibility of damage beyond minor first-aid case
Risk Probability key
1. Probable – likely to occur immediately or shortly
2. Reasonably Probable – probably will occur in time
3. Remote – may occur in time
4. Extremely Remote – unlikely to occur

S = _____ X **P =** _____ **=**

If the level of risk is ranked 1-6 further control measures should be considered

Conclusions and Recommendations

It is recommended that this fire risk management plan is used to inform decisions regarding the options available to F on discharge from hospital. Alongside these control measures there are other important factors that should be considered in order to manage the risk. It has been recommended that a referral for a forensic assessment is made to further inform the risk assessment and risk management process. This may include a functional analysis of F's fire setting as well as other risk management strategies. It is recommended that a zero tolerance approach is adopted and that in consultation with the police F is informed that any future fire incidents will be reported to the police and that this may result in a prosecution.

The management of fire risk is heavily dependent upon the successful monitoring and maintenance of F's mental health, including medication concordance. This has been particularly difficult to manage in the past and it is therefore recommended that F is offered a higher level of support, for example a Community Treatment Order. A robust crisis management plan is essential as we know that it is at this time that he is the most vulnerable to fire setting. Consideration could also be given to F's coping strategies and the on-going process of developing alternative ways of managing his negative thoughts and feelings. This may involve a referral for psychological assessment and intervention.

Whilst it is impossible to fully eliminate the risk of fire setting, the risk management plan identified reduces the risk probability score from 2 (reasonably probable, probably will occur in time) to 3 (remote, may occur in time).

Appendix 2

Fire and Mental Health Liaison Project – Case Study Mr X

Reason for referral

Mr X was referred to the Fire and Mental Health Liaison Officer by a Consultant Psychiatrist working for Manchester Mental Health and Social Care Trust. He was concerned about a 79 year old gentleman (who will be refered to as Mr X) who lives alone and who has a diagnosis of alzheimer's dementia. His family had expressed concern that Mr X has had 3 separate fire incidents involving unsafe discarding of smoking materials, possibly occurring whilst falling asleep. On two occasions neighbours had noticed smoke coming from the house and had removed the arm chair that had caught fire. The other occasion involved family observing a very large burnt hole in the mattress which they concluded was caused by a cigarette. The fire service were not aware of this gentleman and had not turned out to his address.

Assessment and Intervention

The FMHLO carried out a joint visit with a CSSO to deliver a HFRA. During this visit a sofa throw and bedding pack were provided. The FMHLO also used occupational therapy skills to assess Mr X's smoking pattern and habits. The assessment concluded that Mr X was inaccurately putting his cigarettes out using his right arm because of a previous fractured shoulder and associated limited movement of his affected shoulder. There was evidence of large amounts of ash on the floor by the ash tray. The ash tray and table was moved so that he could put his cigarettes out using his left hand.

The FMHLO liaised with family to obtain their perspective of the fire risks because Mr X did not perceive that he had a problem and due to the impairments associated with dementia he was not able to take on board the risks associated with his smoking. Family were able to provide a clearer picture of how Mr X was functioning on a day to day basis and provided valuable information about what he was doing that was unsafe. This identified several areas of difficulty around managing his activity of daily living tasks.

The FMHLO updated the risk assessment and contacted the consultant to provide an accurate picture of the fire risks and to raise awareness of the seriousness of the issues. Consequently his out patient appointment was brought forward and a referral to the community mental health team was made so that Mr X could have a full assessment of his needs and his ability to live safety and independently within his home environment.

Further follow up visits were carried out by the FMHLO and one included a CFS officer to ensure that all possible environmental adaptations were provided. Two additional smoke alarms were fitted, one in the lounge and one in the bedroom during this visit.

Due to continence issues Mr X had put the fire retardant sofa throw in the wash and it was on the washing line on arrival. A second throw and bedding pack were provided. Advice was given to family around purchasing a new mattress without a foam headboard. Visual reminders were also provided to remind Mr X to smoke at the back door, which is what he said he preferred to do but had difficulty remembering.

Conclusion

Mr X's case is now being assessed and monitored by specialist mental health practitioners. The fire service have been made aware of a serious fire risk and have been able to provide interventions to significantly reduce the risk of serious harm. The FMHLO has been able to coordinate the timely input from both organisations and raise awareness of fire risk to relevant parties which in this case triggered immediate access to specialist services.

The unique factor is that the FMHLO has been able to contribute the occupational therapy perspective which provides a holistic perspective of the person. Fire risk is considered within the context of the person, their environment and their daily occupations which is necessary to fully assess fire risk for people with complex mental health needs and for whom a home fire risk assessment alone is not enough.

Occupational Therapist: Fire and Mental Health Liaison Officer
A Case Study

Background information

The client (who will be known as Miss B to protect her identity) was referred to the Occupational Therapist: Fire and Mental Health Liaison Officer (FMHLO) by a rehabilitation unit following a fire incident whereby Miss B had discarded a cigarette in a waste paper bin. The materials in the bin started to smoulder and this had set the smoke alarms off.

Miss B is a 57 year old woman who has a long history of psychotic depression. She experiences command hallucinations which tell her to set fires. Miss B has a history of deliberate fire setting and the following incidents have been reported:

- Set fire to her bed resulting in losing her tenancy and being evicted
- Set fire to her flat resulting in eviction
- Set fire to curtains whilst in hospital

The case study demonstrates the use of the unique Occupational Therapy perspective to summarise the issues concerning fire risk and to describe it within the context of Miss B's mental health, lifestyle, daily occupations, social and physical environment.

A joint visit was coordinated whereby a fire service representative attended with the Fire and Mental Health Officer to carry out a Home Fire Risk Assessment and recommendations were made to minimise the risks.

Sources of information

Conversation with client, care coordinator, electronic notes

Home Fire Risk Assessment findings

Person

Miss B is a 57 year old woman who has a diagnosis of psychotic depression. Her condition is managed by medication and which fluctuates in presentation and how it impacts upon her function.

Miss B has a history of setting fires which have been attributed to command hallucinations during times of stress.

Occupation
Miss B is unfamiliar with her new electric cooker and has had limited opportunity to cook for herself whilst in her current accommodation. It was recommended that in order to increase her independence and safety whilst using this equipment she should have practice cooking sessions with her care coordinator. Miss B is a heavy smoker and she smokes in her lounge and bedroom.

Environment
Miss B was about to move from hospital accommodation into 24 hour supported accommodation. A discussion took place with care staff, FMHLO, the FPLO and Miss B's care coordinator regarding how best to manage the risk within the new environment.

General advice was given to the manager to ensure that the building's risk assessment is up to date. It was also recommended that the manager re-visits the evacuation policy and procedure with all staff so that each individual's needs are taken into consideration.

The following environmental adaptations and equipment were recommended:

1) Remove recycling bins from communal stair well
2) Self closing door bracket for Miss B's front door
3) Fire retardant letter box for Miss B's front door
4) Ensure storage cupboard on first floor is kept locked

It was agreed that the fire service would provide the following:
1) 2 additional smoke alarms for the lounge and bedroom
2) Fire retardant bed pack
3) Fire retardant throw for sofa/chair

GMFRS responses to survey question 10

In your opinion what else would help you in working with people with mental health needs?

‘*’Roll out the programme to the rest of GMFRS”*

‘’The role as I have experienced is not sufficient to assist front line operational services in dealing with fire related mental health issues, it may be effective in a more community fire safety based environment when dealing with HFRA’s and risk assessments of people but I can not say for sure as I have no experience of dealing with them in this area”

‘’Not just mental health but as with all specialist staff should be able to find contact details by post, or on HFRA leaflet list of specialist staff who may be able to reduce risk in complex cases”

‘’I found the role extremely useful when I worked in Manchester South, and there have been times since I have moved to Salford borough where I have felt it would have been useful to have the role here. This role is an asset to the Fire Service”

‘’Continued training, however it simply isn’t high enough up the to do list for ops crews as they are time constrained and other work is more relevant’’.

‘’ *The service provided by the FMHLO is first class, she has assisted myself with many difficult cases of persons suffering mental health illnesses. Without this contact the follow up actions in support of the person would not be as effective”*

‘’Only recently made aware of this service by another Watch Officer. Better awareness publicity and use of available services would help those who are unaware”

‘’Updating training on a regular basis as more and more people with these needs return to the community”

‘’Regular training and meetings with the FMHLO & any other support staff. Received one session per watch in last 2 years”.

‘’Formal documentation procedure. List of contacts”

‘’I have been extremely happy with the support and advice I have received the FMHLO when I have felt the need to make referrals. I think that the service offered is excellent’’

‘’continuation training’’

‘’The FMHLO is exceptionally good in her role. On numerous times in the last two years I have called on her assistance and there has never been a time that I have had unanswered questions. The work which she does is an excellent support tool for Watch Officers to utilise in the everyday encounter of people with mental health issues and fire related incidents’’

‘’We need the whole of GMFRS to be covered not just a couple of boroughs’’

‘’We have had problems with getting our new AFA procedures across to Mental Health professionals in recent months. Would it be possible for Liaison Officers to arrange meetings with managers to get our message across?’’

Explanation of MMHSCT Fire Fatality Data Collection Methodology

Method of data collection

The fire investigation department at Greater Manchester Fire and Rescue Service provided the Fire and Mental Health Liaison Officer with names and addresses of people who had died in fires across Greater Manchester between 1999 – January 2011.

Those names and addresses that were within the catchment area of Manchester Mental Health and Social Care Trust were then cross referenced with Amigos electronic records system (for MMHSCT) to see whether the person had been known to services.

The catchment area for MMHSCT is split into north, central and south Manchester and covers the following areas:

Blackley, Charlestown, Crumpsall, Moston, Lightbowne, Harpurhey, Cheetham, Newton Heath, Beswick, Clayton, City Centre, Bradford, Ardwick, Gorton, Hulme, Longsight, Levenshulme, Moss Side, Whalley Range, Fallowfield, Old Moat, Chorlton, Withington, Burnage, Didsbury, Northenden, Brooklands, Baguley, Benchill, Sharston and Woodhouse Park.

Limitations of the data

Some of the individuals not known to MMHSCT may have had a mental health need that was either undiagnosed or where may have been receiving treatment/support from other agencies other than secondary mental health care services eg GP or voluntary sector. It has been possible to identify whether the coroner considered mental health to be a factor involved in some of the cases within the catchment area but who were not known to MMHSCT. However, this data is not available for the 2nd year of the project as these cases are still yet to go to the Coroner's court for an inquest. Therefore for purposes of this evaluation the data will be used to compare the total number of fire deaths that occurred within MMHSCT catchment area with the number of those cases who were known to MMHSCT.

Year April - April	Total number of fire deaths within MMHSCT catchment area	Number of fire deaths of people known to MMHSCT
1999 - 2000	25	6
2000 - 2001	9	0
2001- 2002	15	5
2002 – 2003	8	3
2003 – 2004	16	3
2004 – 2005	12	3
2005 – 2006	6	1
2006 – 2007	14	3
2007 – 2008	6	2
2008 – 2009	4	2
2009 - 2010	6	1
2010 – 2011	5	1