

Fire safety in the home: local lessons - global reach

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- Ethics approval obtained from Bournemouth University Research Ethics Committee.



Role of Fire and Rescue Services (FRSs)

- UK Fire and Rescue Service Act 2004
- Prevention Agenda
- Community Safety Education
- Globally fire safety education is increasing too



Rationale

- Rising numbers of people living with dementia in the United Kingdom (UK) and globally.
- In the United Kingdom (UK) two thirds currently live within the community, rather than in residential or nursing care accommodation (Alzheimer's Society, 2007).
- Impairment, disability and dementia are substantial factors in increasing the risk of injury or death from fire in the home (US Fire Administration, 2006).
- There is, therefore, a concern that the number of people with dementia injured or dying in fires in the home will increase, in relation to the rising number of people living with dementia internationally.



Fire fatality statistics – Great Britain 2013-14

- Over two thirds of all fire deaths were accidental house fires and more than half of the victims were aged 65 years or older.
- The risk of dying in a fire for people aged 80 and over is more than four times higher than average. People aged between 65 and 79 also have a higher than average rate.
- Households with no smoke alarm accounted for 38% of deaths, and nearly one fifth of deaths occurred where no smoke alarm worked.
- Smokers' materials (e.g. cigarettes, cigars or pipe tobacco) caused the largest share of deaths in house fires (37%), while cooking appliances were the source of ignition in more than half of accidental fires in houses without deaths.

Crowhurst, 2015



Aim

The aim of this project is threefold, to:

- 1) develop knowledge** that can be used internationally to help people affected by memory problems or dementia to be safer in their homes;
- 2) enhance the quality of life** of people affected by dementia by enabling people to live independently in their own homes for longer;
- 3) train** Fire and Rescue staff and volunteers, and other practitioners who visit people in their own homes, to ensure they are better equipped to work with people affected by dementia to ensure they are as safe as possible from fire risk.



- **Mixed methods study.**
- **Online survey** emailed to all Fire and Rescue Services (FRSs) in the United Kingdom (UK) (n=55) to establish provision of guidance and resources for people affected by dementia. Three reminders were emailed following the initial email inviting FRSs to take part. Twenty FRSs responded giving a response rate of 36.4%.
- **Four focus groups:** fire service professionals; other professionals; and two with people with dementia and family carers in UK (South West). Explored experiences of home safety risks (including fire risks) and risk reduction strategies, alongside ideas for project outputs such as resources.



Focus Group Participants

Breakdown of participants

| Group number | People with dementia | Family members/ carers | Support group facilitators/ volunteers | Fire and Rescue Service professionals | Other professionals | Total participants |
|--------------|----------------------|------------------------|--|---------------------------------------|---------------------|---------------------------|
| Group 1 | 0 | 0 | 0 | 10 | 0 | 10 |
| Group 2 | 0 | 0 | 0 | 0 | 4 | 4 |
| Group 3 | 4 | 5 | 0 | 0 | 0 | 9 |
| Group 4 | 4 | 3 | 2 | 0 | 0 | 9 |
| Total | 8 | 8 | 2 | 10 | 4 | 32 |



Ethics and analysis

- **Informed consent** - Process consent (Dewing, 2008) – Information Sheet – Give additional time to decide on participation.
 - Developed a **vignette** for the focus groups with people with dementia and their carers to ensure that we were sensitive to the topic area.
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- Audio voice files transcribed.
 - **Inductive thematic analysis** guided by focus group topic guide.
 - Carried out by one researcher, checked and discussed with another researcher.
 - Managed using Nvivo10.
 - Survey analysis undertaken in Survey Monkey, including **descriptive analysis** of the frequency of responses to each question.



Fire risks

- **Related to a person's past role or actions** (smoking in bed, electrical engineer)
"... because whenever a light bulb blew, he would actually completely disconnect the light fittings and leave bare wires hanging from the ceilings. Anything electrical was a hazard because if it didn't work he would just dismantle it and leave it. And nothing that we told him was ever going to have any effect."
(G1F1).
- **Using appliances inappropriately** (electric kettle on gas hob, metal trays in microwave).
- **Related to memory impairment** (forgetting to turn off heater, leaving food in oven, not responding to smoke detector).
- **The person's home environment** (overloaded plug sockets, clutter, drying washing too close to fire).
- **People affected by dementia focused less on fire risks** and more on other types of home safety risk, for example slipping on wet bathroom floors, or ingesting bathroom cleaning products by mistake, flooding, trip hazards, clutter.



Risk reduction strategies

- **Dementia aware prevention strategies** (early intervention to help future proof homes, risks can change over time as dementia progresses, other risks prioritised over fire, education for people affected by dementia and professionals).
- **A person-centred approach** (no one size fits all approach, risk assessment is individual, repetition of key messages).
- **Approaches may often be time limited**, and eventually the risks may mean that most people with the condition are likely to need some help to complete everyday tasks for themselves. Managing this increasing dependency is difficult for both the family carers and people with dementia themselves.
- **Partnerships** to identify vulnerable households (target prevention activities and assist crews at incidents, fire service become involved in multiagency teams that provide care).
- **Increasing potential of assistive technology** in the home environment (flood detectors, gas shut off valves, telecare linked smoke detectors).
Challenge who funds it.



Risk reduction strategies

- **Challenges** (individuals and carers not accepting diagnosis or support, unintended consequences)

...the lady with dementia whose family had put signage up on the front door, because she used to go out and wander. And she had the fire in the airing cupboard, and she walked past the fire, and went downstairs, and because she knew she shouldn't go out the front door, she went and sat in the front room. But all the doors were open, so she died from smoke inhalation... there were signs on the door, and the family told the Fire Investigation Officer, that because she had a habit of going out and wandering, and the police kept bringing her home, and they kept getting phonecalls at three or four o'clock in the morning, there was a sign on the front door, that said, don't go out of the door. So, she didn't. G1F4.

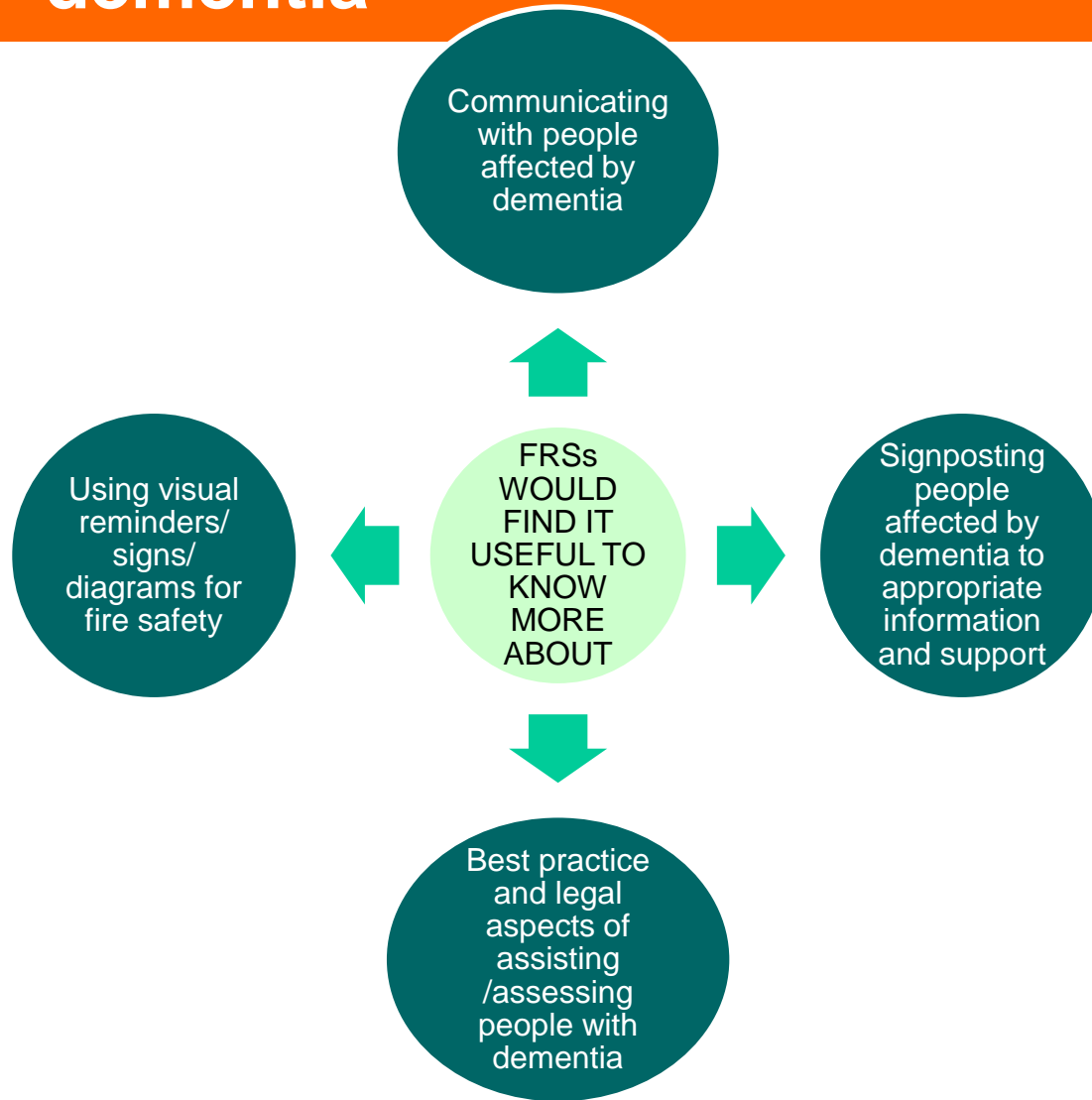


Existing guidance and resources provided by FRSs

- **Older people:** leaflets, talks to groups, signposting to other organisations and large print booklets. Fire safety messages are written in plain English and promote electrical safety, good housekeeping, cooking safety, as well as advice on bedtime routines.
- Some FRSs provide fire safety guidance to **people with dementia and/or their carers** (examples included a checklist fridge magnet to keep safe at night, leaflet with less words and more pictures).
- Other FRSs do not offer this group any specific resources or key messages; instead using the resources designed for older people in general.
- FRSs were less likely to offer professionals working with people with dementia and/or their carers dementia-specific fire safety guidance.



Gaps in FRS knowledge about dementia



- Evaluation of project to measure outcomes and impact April – Sept 2016.
- DFRS – developing fire safety resources for people affected by dementia and telecare provision across Dorset.
- 7 x DFRS Dementia Champions trained
- Dementia Awareness Training being rolled out to 850 frontline staff plus Wiltshire staff as the service combines in April 2016.
- DFRS now have an email address that Firefighters can use to report concerns about dementia following incidents
- CFOA to share report on survey and focus group findings nationally.



Conclusions

- Fire prevention strategies cannot overlook the growing numbers of people living with dementia across the globe, and should take into account the **need for joined up working, sharing information and person-centred approaches.**
- People with dementia need **individualised support and understanding** to enable them to remain living in their own homes.
- Risk assessments must take into account the **individual differences and needs of each person with dementia**, and should be undertaken regularly as the condition progresses and behaviours change.
- Fitting **assistive technology** (e.g. telecare linked smoked detectors) is **essential** for people in the later stages of dementia and/or with mobility difficulties.
- Fire Service professionals and others who work with people with dementia in their own homes must **receive dementia training.**
- There is a need for a **range of resources that reflect individual needs.**



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