

A Shock to the System

Electrical Safety
in an Ageing Society



Table of Contents

Executive Summary	4
Recommendations from Electrical Safety First.....	5
About this Inquiry.....	9
Eight future trends.....	10
Housing and electrical safety in an ageing society	11
What is the situation today?.....	11
What will the situation be tomorrow?	12
What are the indicators of poor electrical safety in the homes of older people?.....	13
Challenges for older people in maintaining electrical safety.....	16
Identifying the ‘hidden hazard’.....	17
Home Improvement Agencies and Handyperson Services – supporting a preventative agenda.....	19
Dementia and electrical safety in an ageing society	23
What is the situation today?.....	23
What will the situation be tomorrow?.....	23
How can the symptoms of dementia effect electrical safety?.....	24
Electrical safety in the homes of people with dementia.....	24
Ageing in place safely.....	26
The role of assistive technology.....	26
Sheltered housing: ‘beyond the front door’.....	28
The role of care homes in promoting electrical safety for people with dementia.....	29
Endnotes	30

Executive summary

This report finds that older people, whether it is due to the housing conditions they live in, the health conditions they may have or the lack of advice and practical help available to them, are often disproportionately at risk from electrical hazards.

The report calls for action to be taken now to ensure our ageing population does not affect levels of electrical safety. Findings from the report include:

- Older households are less likely to contain features that can protect from electrical hazards.
- The numbers of over 65s in the private rented sector is predicted to rise from 350,000 in 2009 to over 700,000 by 2035.
- Older people who are in the private rented sector, which generally has a poorer safety record than other housing tenures, are often vulnerable and open to landlord exploitation.
- Our ageing population will result in a significant increase in the numbers of people living with dementia. Certain symptoms of dementia can increase the risk of injuries or fatalities from electricity.
- Electrical safety is one of the most common concerns when leaving a person with dementia alone in the house; reducing these

fears may impact decisions made over when to admit a person with dementia to residential care.

The vast majority of older people would prefer to 'age in place' – that is, remain living in their own homes for as long as possible. As our ageing population puts further strain on health and social care budgets, it is also preferable for both public and private finances. To enable ageing in place, the home environment must be as safe as possible; safe, decent-quality housing can delay or even prevent admission into residential care for older people.

And if the time comes that residential care or sheltered accommodation is the best option, the case for many people with later-stage dementia or perhaps vulnerable older people in the private rented sector, these environments must be as electrically safe as possible.

This Inquiry, commissioned by Electrical Safety First, was established with the aim to promote the need for policy makers, older people and their families and other key stakeholders to better understand the importance of electrical safety in an ageing society. During the course of the Inquiry we took evidence from: Sue Adams (Care and Repair England), Steve Turek (London Fire Brigade), Bob Stevens (Hanover Housing), Andrew Chaplin (Foundations), Karen Croucher (University of York), Sheila Peace (Open University), Frank Bertie (National Association for Professional Inspectors and Testers), Gillian Stacey (Dementia Care), Barbara Dunk (South London and Maudsley NHS Trust), Dr Kevin Doughty (Universities of Newcastle, York and Coventry), Nigel Harris (Designability) and Spencer Sutcliff (London Fire Brigade). This report represents the findings of the Inquiry.

The authors would like to extend their thanks to all that attended the evidence session, especially attendees who presented evidence to the Inquiry, London Fire Brigade for hosting the event, and Sue Adams OBE for chairing. We would also like to thank members of the review group for their helpful and knowledgeable comments, and to NAPIT for surveying their members.

Recommendations from Electrical Safety First

Recommendations for central government

- Government should provide a scheme that allows free electrical safety checks to ‘at risk’ homes – for example the homes of older people who have lived in the same property for a long period of time and/or who have a long term condition or complex health needs, including dementia.
- Government should make it mandatory for private rented sector landlords to inspect electrical installations in their properties every 5 years.
- Greater powers should be given to Local Authorities to improve home safety in the private rented sector.
- Government should ensure that older people in the private rented sector are legally protected so that they are able to report electrical hazards to landlords without fear of eviction.
- Government should focus on ensuring implementation of the Lifetime Homes standards across the UK. Rural areas, which have seen the slowest implementation of the standards and are set to see the biggest demographic changes as our population ages, should be prioritised.
- Government should ensure mandatory 5 year electrical safety checks within the care home sector and raise awareness in sector of how the symptoms of dementia can lead to tampering of electrical appliances, rendering them unsafe.
- Government and the voluntary sector should focus more efforts on ensuring that older people claim the benefits they are entitled to which can be used to carry out electrical repair work.

Recommendations for the local government sector

- The Local Government Association should lead on promoting best practice within the local government sector on the provision of safety checks in homes where the person receives long-term care or has complex health needs.
- Local authorities should provide training for handyperson service staff on undertaking visual electrical safety checks in properties and how the symptoms of dementia can affect electrical safety.
- Local authority responsibilities under the Care Act should recognise the links between electrical safety and suitable, safe living standards. The Local Government Association should promote best practice to local authorities on the provision of information and advice on where to find trusted tradespeople in their areas.
- Local authorities must ensure high levels of electrical safety when a person is in receipt of an individual care plan. There should be a focus on preventing or delaying admission into care whilst maintaining high levels of electrical safety.
- Local authorities should ensure that if there are multiple agencies involved in the running of a sheltered housing block, there should be one point of contact to report electrical hazards.
- Health and wellbeing boards should bring on a housing specialist to ensure that the link between housing, electrical safety and public health is taken into account when setting local health priorities.
- Local authorities should develop awareness raising schemes targeted towards the groups most at risk of poor electrical safety – for example low income older home owners.

- An electrical safety checklist should be distributed by local authorities to individuals and organisations frequently entering the homes of older people. This group includes GP's, carers, handyman services and gas and electrical engineers, and all health and social care staff.
- Using the social prescription model, local authorities, working with stakeholders such as the Fire Brigade, should 'prescribe' an electrical safety check. Neighbours or friends can use the electrical safety checklist, included in this report, to easily spot the warning signs of electrical hazards.
- People aged 80 or over make up nearly 40% of fatalities from portable heater fires. This 'at-risk' group should be targeted with free portable heater safety checks.

Recommendations for older people, their families and carers

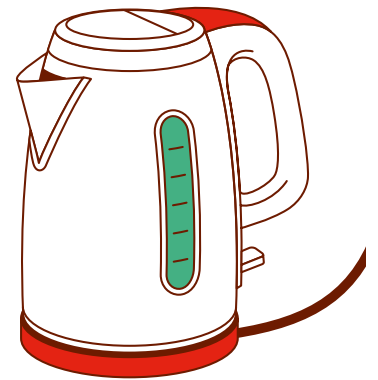
- Awareness needs to be raised amongst the wider public of how the symptoms of dementia can increase electrical risks – as the numbers of people with dementia increase, this will become increasingly important.
- If an older family member has limited mobility, sensory loss and/or memory problems ensure that the smoke alarms are tested regularly, and consider whether any assistive technologies may be suitable, especially the provision of monitored/linked smoke, heat and temperature detection.
- Older people should ask their energy provider to add them to the priority service register, making them eligible for additional help.
- With older people often living in the same house for a long period of time without undertaking any building work which may result in electrical hazards, neighbours should offer to do a quick electrical safety check in the homes of their older neighbours, using the checklist included in this report.
- Older people with dementia, and their families, should ensure that if they use assistive technology to protect from fire or electrical risks their needs, environment and health are routinely evaluated. This will ensure that the assistive technology is suited for their needs, and most effective in creating a safer environment in the home.

Key findings

Housing and electrical safety in an ageing society

- Only 39% of households with a couple over 60 have all five electrical safety features (all PVC wiring, a residual current device, a modern consumer unit, all modern earthing and a miniature circuit breaker) in their homes, compared to a national average of 48.8%.
- 1 million over 75s live in non-decent homes.
- Low-income older home owners are the group most likely to live in 'non-decent' housing, and 42% of households living in non-decent housing have lived in their property for 30 years or more, indicating older people are disproportionately exposed to electrical hazards.
- An ageing housing stock indicates increased electrical risks, with houses built before 1919 more likely to contain the most extreme hazards, including those of an electrical nature.
- The majority of older people live in owner occupied properties. Yet these dwellings are least likely to contain features which protect against electrical hazards, whilst social rented dwellings are the most likely.
- As our population ages, ILC-UK predicts that the number of older people in the private rented sector will increase sharply. Older people living in the sector are often vulnerable and exposed to landlord exploitation. This raises the possibility of older tenants being unwilling to raise electrical safety issues in the home. There is currently no requirement for landlords to undertake electrical safety checks at fixed intervals.
- Fears of letting strangers into the house and being overcharged can restrict older people's ability to get essential electrical repairs and maintenance done, increasing the chances of a serious electrical hazard in the home.
- There has been a reduction in Local Authority assistance for vulnerable home owners to undertake maintenance work in the home. The costs of hiring a tradesperson can be prohibitively expensive for many older people, resulting in increased numbers of over 50s undertaking potentially lethal DIY.
- Fuel poverty can also result in the use of electric space heaters and electrical blankets increasing – two appliances with poor electrical safety records.
- Social isolation amongst older people can result in electrical hazards being unidentified. A multi-agency approach is needed to prevent such hazards remaining unidentified – organisations such as handyman services can play a crucial role in this, although budgetary restrictions on local government pose a challenge to this.
- Older people living in rural areas are particularly vulnerable to electrical harm. Homes in rural areas tend to be older, and implementation of the Lifetime Homes standard is slower than urban areas. Rural areas are ageing faster than urban ones, creating future challenges.
- The implementation of the Care Act is an opportunity for Local Authorities to develop good practice in providing information and advice to older people on how to maintain electrical safety. With electrical safety a prominent concern for many families of people with dementia, reassurance that the risks from electricity have been minimised can prevent or delay the need for care; a crucial element of the Care Act.

1 million over 75s live in non-decent homes.



Key findings

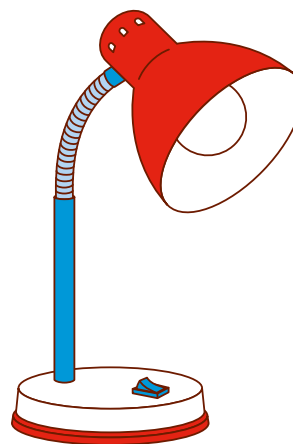
Dementia and electrical safety in an ageing society

- Electrical safety risks can be higher for people with dementia. The symptoms vary according to the type of dementia, and can include memory problems, difficulties with judgement and thinking, planning and organisation, in addition to confusion, sensitivity to light and temperature changes and decline in motor skills. These can increase risk — unpredictable and seemingly irrational actions can also result in electrical appliances which have been deemed safe, suddenly becoming unsafe.
- The numbers of people living with dementia is set to increase substantially. Simultaneously, more and more electrical appliances are becoming part of our daily lives. Many people with dementia are not able to adapt to using new appliances, and therefore continue to use older, sometimes unsafe appliances. As a consequence, in the future we may see more electrical incidents involving people with dementia.
- Electrical safety has been found to be one of the greatest concerns of carers and family members when leaving a person with dementia on their own. Precautions are instinctively taken, however greater awareness and training surrounding electrical safety is needed.
- Measures need to be taken to prevent ‘crisis points’ – such as a fire scare or electric shock – in the care of a person with dementia, which can lead to premature admission into residential care.
- A reduction in electrical hazards in the home can contribute to people with dementia living independently in their own homes for longer, leading to savings in social care.
- A range of assistive technology devices are currently available which can promote

independence by reducing risks as a result of inappropriate use of electrical appliances for people with dementia. These devices must be chosen based on a comprehensive assessment of the person’s needs, wishes and routines, and their environment. Good design is important when installing these devices, and they must not be used entirely at the expense of human judgement.

- As the needs of people with dementia change over time there should also be regular reviews to ensure that needs continue to be met.
- Changes to care structures in recent years have seen fractured responsibility in running sheltered housing for people with dementia. Multiple agencies are likely to be involved, increasing the chance of responsibility for important safety checks being shifted from one agency to the next.
- Care homes, where 80% of residents have a form of dementia or severe memory problems, lack a statutory obligation for electrical testing at set intervals. Good practice needs to be established highlighting the particular dangers electrical fires can pose in care homes.

A reduction in electrical hazards in the home can contribute to people with dementia living independently in their own homes for longer, leading to savings in social care.



About this Inquiry

This Inquiry, commissioned by Electrical Safety First, was established with the aim to promote the need for policy makers, older people and their families and other key stakeholders to better understand the importance of electrical safety in an ageing society. Electrical hazards pose a threat to older people, with electric shocks and domestic fires of an electrical origin claiming the lives of 55 people in 2012/13¹. However, this Inquiry is important for other reasons – electrical risks in the homes of older people are often an indicator of poor quality, ageing housing stock, whilst concerns from family and carers over home safety are a major factor in deciding to admit older people with dementia into residential care. These issues led the Inquiry to focus on two priority areas – housing and dementia.

The UK is currently experiencing unprecedented demographic changes. From 1971 to 2012, the proportion of people aged 65 and over increased from 13% to 17% of the total UK population². The increase in older people in the UK is set to continue – by 2013 it is expected that people over 65 will account for nearly 1 in 4 of the population³. Whilst bringing opportunities, our ageing population also brings with it a number of challenges, many of which cause concern when aiming to promote electrical safety. The number of people living with dementia in the UK is expected to sharply increase as our population ages, from 800,000 people in 2014, to 1 million by 2021 and 1.7 million in 2051⁴. This increase is exacerbated by the sharp growth of the ‘oldest old’ in our society, and as the probability of having dementia increases as a person ages⁵.

Our ageing population also brings with it challenges for housing. To keep up with expected population growth, between now and 2037 we will need to build houses at the fastest rate since the 1970s⁶. Recent government policy indicates this rate is far from being achieved; our housing stock therefore will continue to age, bringing a possible increase in the associated electrical hazards. There is also considerable overlap between

the issues surrounding housing and dementia, with 2/3 of people with dementia living in the community⁷.

As part of this report, an Inquiry was held to bring together relevant experts, not just in electrical safety but in housing and dementia policy, to steer the direction of the Inquiry and highlight the most pressing issues. Despite the wide ranging areas of expertise of the evidence givers, there were a number of surprisingly consistent messages that emerged. Experts from the fields of both dementia and housing policy often acknowledged that there is relatively little awareness of the danger posed by electricity in the home, amongst both policy makers and the public. Rather than a reactionary approach to potentially fatal electrical hazards, a multi-agency preventative approach can be effective in saving lives and maintaining the independence of older people. Evidence givers also noted that an appreciation is needed of the correlations between poor electrical safety in the homes of older people and other issues; electrical hazards in a home can also indicate poor housing conditions and even poor health and wellbeing of the occupants. The importance of a preventative agenda was also highlighted by dementia experts; with the neurological symptoms of dementia increasing the risks of electrical shock or fire, minimising risk can allow older people with dementia to remain in their own homes for longer. And with the number of people living with dementia set to increase sharply, this issue is becoming more pertinent.

Eight possible future trends which could affect electrical safety in our ageing society:

1. The rise of the 'oldest old'

In 2012 there were 514,000 people aged over 90 in the UK. By 2027, it is predicted that number will be over 1 million. This age group is more likely to be in poverty, have limited mobility and have dementia – all signifiers of being at risk from electrical hazards.

2. A shortage of suitable housing stock

There are not enough houses being built to adequately house the increased numbers of older people in the future. A shortage of new builds mean that housing stock will continue to age. Older houses are more likely to be classed as 'non decent' and contain a major hazard.

3. The growth of the private rented sector

Any future increase in the number of older people in the private rented sector causes concerns, with a poor record of electrical safety in the sector and a lack of statutory obligations for landlords.

4. The slow uptake of the lifetime homes standards

Having electrical sockets at an accessible height prevents dangerous socket overloading. However rural areas, which will see the biggest increase of older people, have seen a worryingly slow uptake.

5. An increase in the use of technology in everyday life

As technology becomes increasingly integrated into the lives of people of all ages, the future could see an increase in incidents of electrical fires and electric shocks.

6. Changes in the care structures of sheltered housing

Whereas previously one provider, such as a local authority or a charity, would manage the entire care provision in sheltered housing, there is a growing trend in multiple agencies assuming responsibility for different areas. The fractured nature of this could see electrical hazards not being dealt with.

7. An increase in the numbers of older people living with dementia

Not only will this increase the numbers of older people who are at greater risk from electrical hazards, but financial pressures on health and social care budgets will further increase the importance of enabling older people to safely live in their own homes.

8. Local Authority budgetary cuts

This could see the reduction in schemes such as handyperson services, which help low income older home owners with essential electrical repairs.

Housing, Electrical Safety and an Ageing Society

What is the situation today?

Older people in England find themselves at greater risk from electrical hazards than younger people. Older households are less likely to contain the five features that best protect against electrical hazards – whilst 48.8% of all households have all five of these safety features, that number falls to 39.5% for households with a couple aged 60 or over, and 40.3% for households with one person aged 60 or over⁸.

Vulnerable people over 75, particularly low income older homeowners, are the group most likely to live in poor housing, with a million occupying non-decent homes⁹. The length of time a person has lived in a dwelling is also an indicator of poor housing conditions. 42% of householders who have resided in their property for 30 or more years live in non-decent accommodation¹⁰, further suggesting that older people are disproportionately at risk of poor electrical safety in the home. The housing profile of over 65s in England differs from other age groups. To improve the electrical safety of older people, policies need to be developed that show an appreciation of the unique aspects of older people’s housing in England.

Criteria of the Lifetime Homes standards:

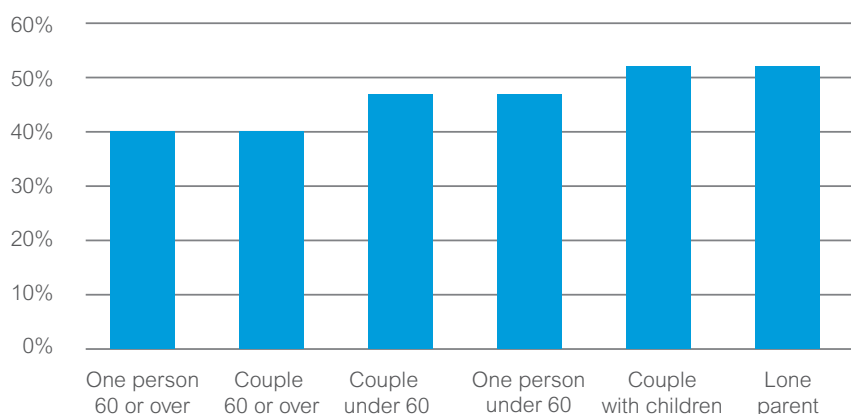
The principle is to “locate regularly used service controls, or those needed in an emergency, so that they are usable by a wide range of household members – including those with restricted movement and limited reach”

This ensures that electrical switches, sockets and fuse boxes are within easy and quick reach for an older person with restricted movement.

Lifetime Homes Standard

The Lifetime Homes Standard is a set of sixteen recommended design features for dwellings, with the aim to enable homes to be accessible and adaptable for older people. Criterion sixteen is important for electrical safety, as it recommends that service controls, including electrical sockets and consumer service units, are at an accessible height for people with restricted movements¹¹. Accessible electrical sockets prevent overloading of extensions leads, which is a major fire hazard. However implementation of the Lifetime Homes

Fig1 Dwellings containing all five electrical safety features, by age of occupants



Source: DCLG English Housing Survey

Standard remains patchy across England, due to regional differences in regulation – whereas all new private and public sector homes in London are obliged to adopt the standards, in other areas there is no such obligation¹². A concern for older people is that rural parts of England have seen an especially slow pace of change in adopting these guidelines¹³. Rural areas generally have an older housing stock¹⁴, and will be disproportionately affected as our population ages, with the number of people aged 75 and older projected to rise by 90% in 25 years (compared with a 47% predicted increase in urban areas)¹⁵.

What will the situation be tomorrow?

- The make-up of the UK housing sector is already going through significant changes, due to the shortage of available housing and the increasing unaffordability of home ownership.
- Ageing housing stock is set to increase the amount of 'extreme hazards' found in houses across all tenures.

The UK housing sector is undergoing considerable changes as home ownership becomes increasingly unaffordable and the UK's population both increases and ages. For the first time since the 1960s, there are now more people in England who are renting privately than renting from local authorities and social housing landlords¹⁶. To keep up with expected population growth, between now and 2037 we will need to build houses at the fastest rate since the 1970s¹⁷. With little sign of political will to meet these needs, housing demands in the future may become increasingly unsustainable.

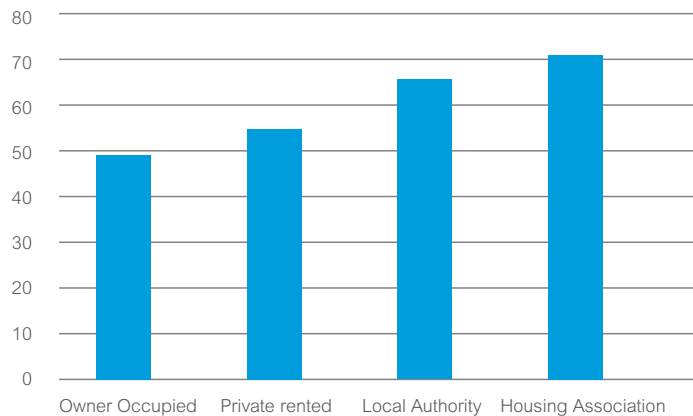
The failure to build enough new houses contributes to an increased danger of injuries and fatalities from electricity; Category 1 Hazards (extreme hazards) on the Housing, Health and Safety Rating System (HHSRS) are

far more prevalent in houses built before 1919¹⁸. This includes electrical safety issues, such as electrical shocks and burns relating to exposure to electricity. Buildings built before 1919 are also more expensive to maintain. They account for 41% of total expenditure for basic repairs, even though these homes make up only 20% of the entire housing stock¹⁹. Unless measures are taken now, the future old in England could find themselves living in electrically unsafe ageing housing, and face prohibitively expensive repair costs, leading to an increase in electrical hazards.

What are the indicators of poor electrical safety in the houses of older people?

Housing tenure

Fig2 Dwellings containing all five electrical safety features, by tenure



Source: DCLG English Housing Survey

Owner occupied housing

- Older people are more likely than other age groups to live in owner occupied housing.
- Owner occupied dwellings are less likely to contain features that can protect against electrical hazards.

The majority of older people live in owner occupied housing. 77% of over 65s are homeowners, compared with 65.2% of the population²⁰. Owner occupied does not necessarily mean a decent home with high safety standards; 20% of non-decent homes in 2012 were owner occupied²¹. Nor does owner occupation necessarily equal financial stability; research conducted by the Joseph Rowntree Foundation found that half of all adults in poverty are home owners²². Owner occupied dwellings were also the housing type least likely to have all five electrical safety features identified by the Department of Community and Local Government's English Housing Survey, with only 50% of owner occupied homes containing all PVC wiring, all modern earthing, modern consumer units, miniature circuit breakers and residual current devices²³.

The five electrical safety features identified by The Department of Community and Local Government's English Housing Survey are:

- All PVC wiring
- All modern earthing
- Modern consumer units
- Miniature circuit breakers
- Residual current devices

Social rented housing

- Homes rented from local authorities or housing associations have a relatively good record of electrical safety.
- However there is a severe shortage of available housing in this sector.

Of the three housing tenures, social rented housing has relatively high levels of electrical safety. 18% of older people rent their home from Local Authorities or Housing Associations²⁴. 70% of dwellings in the social rented sector have all five electrical safety features, the highest of all housing tenures²⁵. In addition, only 7% of dwellings in the social rented sector have a 'Category 1 hazard' on the Housing Health and Safety Rating System, which includes electrical hazards - this is compared with 19% in the private rented sector²⁶. However there is a severe shortage in this country of available social housing, with more than 1.8 million households waiting for social housing; an increase of 81% since 1997²⁷.

Older people in the private rented sector

- Although a relatively small proportion of older people live in this sector, changes in housing trends mean that increasing numbers of older people are likely to find themselves renting privately.
- The private rented sector has a relatively poor record of electrical safety.

- Older people currently in the sector are often vulnerable, raising the possibility of them not reporting electrical hazards to landlords.

Compared to other housing tenures, relatively few older people live in the private rented sector. Only 5.1% of over 65s, and 5.1% of over 75s privately rent, compared with 18% of the total population in England. However, the private rented sector poses particular concerns for the electrical safety of older people for three reasons; the generally poor electrical safety record of the sector, the particular vulnerability of many older residents, and the potential increase in future older generations renting privately.

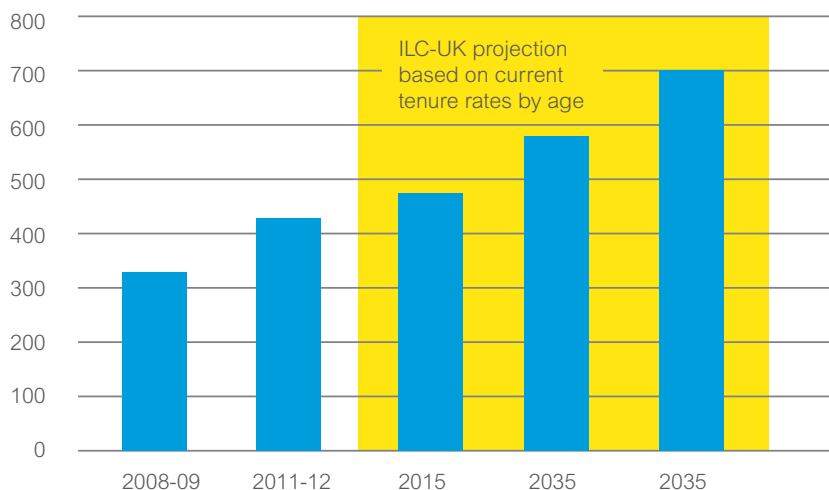
The Housing Health and Safety Rating System (HHSRS) is a risk-based assessment introduced by the government under the Housing Act 2004, and includes key measures for electrical safety standards, such as risks from shocks and fires. 19% of dwellings in the private rented sector have at least one Category 1 hazard²⁹, and 16% of private renters have experienced problems with electrical hazards in the last year³⁰.

Whilst landlords are legally obliged to provide an annual gas safety certificate³¹, there is no such obligation for electrical safety. However, statistically electrical hazards pose more of a threat in the

home. In 2012-13 in the UK, the approximate number of household gas-related fatalities was 24³²; whilst the total number of deaths with causes of electrical origin in the same period was 55³³. 92% of electrical professionals surveyed by the National Association of Professional Inspectors and Testers (NAPIT) believed there should be mandatory electrical safety checks in the private rented sector at least every five years³⁴.

And whilst the current number of older people in the private rented sector is relatively small, this number is likely to rise as home ownership becomes increasingly unaffordable, the number of older people is set to rise dramatically, and there is a continued shortage of housing stock³⁵. Projections in the table below show that the number of people aged 65 and over living in the private rented sector will increase by 100% between 2008 and 2035. This projection is based upon population growth and increased life expectancy, and presumes the proportion of older people in this sector remains the same. However, with the percentage of working age adults living in the private rented sector increasing, the projected numbers may be significantly higher. Any increase in the number of older people in the private rented sector could lead to an increase in the numbers of older people living in poverty. Owning a

Fig3 Numbers of private renters aged 65+(thousands)



Source: DCLG English Housing Survey, ONS Population Projections and author's calculations.

“Advice agencies reported that landlords’ failure to carry out repairs was a very common problem and could have dire consequences for older tenants. Problems listed included failures to fix blocked sinks, to mend leaking roofs and other forms of dampness, to rectify wiring problems or to install adequate heating⁴¹”.

home outright, and the subsequent reduction in expenditure on housing, has been found to significantly reduce poverty levels amongst pensioners³⁶.

In recent years, government policy has placed a strong emphasis on ‘ageing in place’ – allowing older people to remain in their own homes for as long as possible. This is based upon potential savings to the state through reducing residential care costs, and the preferences of older people³⁷. The high proportion of non-decent homes in the private rented sector means that ‘ageing in place’ is not always safe or desirable for older people in this sector. This group often contains the most vulnerable in society, including older people from ethnic minority groups as well as older people who have been forced into privately renting after being evicted from social housing, often for drug or alcohol problems, leaving them with few housing options³⁸.

Some older vulnerable tenants may therefore be exploited by rogue landlords, with their vulnerable position leading to a fear in reporting electrical hazards. 90% of environmental health officers have encountered cases of severe damp, mould, electrical or fire safety hazards in properties in the last year, and more than 60% say that more than half their cases involve people from vulnerable groups³⁹. With landlords having the power to evict most tenants without needing to give a reason,

under a section 21 notice⁴⁰, a fear of eviction may be stopping older vulnerable renters from reporting serious electrical hazards in the home.

Amending Section 21

Under section 21 of the Housing Act 1988, landlords have the power to evict tenants without reason⁴². Whilst the majority of landlords use a section 21 eviction notice reasonably, for example if they are selling the property or want to move in themselves, this system can be abused by rogue landlords. Recent research has indicated an increase in ‘retaliatory evictions’, where tenants are subsequently issued with a section 21 eviction notice if they raise complaints about housing standards or safety. Between April and September 2014, 3,710 people contacted Citizens Advice to get advice about possession action from a private landlord not relating to arrears, and the past year has seen a 38% increase in eviction enquiries which do not involve rent arrears⁴³. In December 2014 a Private Member’s Bill was voted on in Parliament to amend section 21 to combat retaliatory evictions; the amendment had cross-party support, including from the Minister for Housing. The Bill was not passed however as two MPs ‘filibustered’, forcing the voting session to run out of time⁴⁴.

Challenges for older people in maintaining electrical safety

- Older people face challenges in finding tradespeople who they can trust.
- Prohibitive repair costs for electrical work and fuel poverty can both increase electrical hazards in the home.
- Older people are less likely to undertake home renovations, increasing the chances of electrical hazards remaining undetected.

Who to trust?

If electrical repairs or maintenance are needed, finding a tradesperson can be problematic for many older people. Older people can often find it difficult to find a tradesperson they know is reputable, with a fear of vulnerability and concerns around allowing strangers into the home often hindering essential repairs or maintenance, and increasing the chances of electrical hazards in the home⁴⁵. A survey of professional electricians conducted for this report found that 66% of respondents have experienced an older person being nervous about letting a stranger into their home⁴⁶. The hidden nature of many electrical hazards mean that risks are often identified through other repair or cosmetic work in the home. However the amount of work undertaken diminishes as a household gets older, with little 'aspirational' work (for example house extensions or redecorating) undertaken⁴⁷.

And how to pay?

The cost of hiring a tradesperson to undertake electrical work can be prohibitively expensive for some older people. A recent study found that one in eight over 50s live in a home in need of repair, but don't have enough money to pay for the necessary work⁵⁰. The withdrawal of the Private Sector Renewal programme in March 2011 has meant that many vulnerable older home owners on a low income no longer have the opportunity to apply for grants or loans from local authorities to pay for vital home repairs⁵¹. This has a knock on effect, with a recent survey finding that an

increasing number of over 50s are turning to DIY to save money on home repairs, even though 20% carried out tasks they were not entirely comfortable doing⁵². This is a cause for concern, as almost half of all severe electric shocks are caused by a DIY attempt; with the main causes being cutting through power leads, drilling into wiring in walls and repairing electrical items that are still switched on⁵³.

As well as the cost of hiring a professional tradesperson being prohibitively expensive⁵⁴, the rising cost of heating one's own home leads to increased electrical safety risks for older people. Older people are often affected by fuel poverty, with nearly half (46%) of households in fuel poverty containing someone over the age of 50⁵⁵. Despite most older households receiving a winter fuel payment, the fact that older people spend significantly more time in their homes than other age groups⁵⁶ means that many older people struggle to heat their homes. A common method of reducing heating costs is to use electric space heaters. However this can be hazardous, with electric heaters being one of the five most common causes of electrical fires in UK homes⁵⁷. People aged 80 and over made up nearly 40% of fatalities from portable heater fires last year⁵⁸, and research from Electrical Safety First found that more than half of those surveyed would use a portable heater to keep warm this winter⁵⁹. Older people in the private rented sector are particularly at risk, as not only does the private rented sector contain the highest proportion of people in fuel poverty, but they are also exposed to landlord negligence; 65% of private landlords do not regularly test the portable electrical appliances they provide⁶⁰. Electric blankets are another potential hazard, being the cause of a number of fires each year⁶¹.

Identifying the ‘hidden hazard’

- Older people are more likely to be socially isolated, leading to electrical hazards remaining unidentified in the home.
- However a multi-agency approach from people who do regularly enter the homes of older people can prevent electrical hazards remaining undetected.

Electrical dangers in the home have been described as a “hidden hazard”⁶², and whilst often only a qualified electrician can rectify these hazards, there are often warning signs. Examples include fuses frequently blowing and an over-reliance on extension cables⁶³. It is therefore essential that people who come into contact with older people on a regular basis are able to identify these risks. Older people may identify potential electrical hazards themselves, or their family members. However older people are more likely to be isolated; 17% of older people are in contact with friends, neighbours and family less than once a week, and 11% less than once a month⁶⁴. With older households already less likely to contain electrical safety features, such as modern earthing and residual current devices⁶⁵, there is a danger in the homes of isolated older people that electrical hazards are remaining undetected.

Even in isolated older households however, there may be individuals who would enter the home. Professional carers who regularly enter the homes of older people are an underused resource to spot electrical hazards in the home – for this to be effective however greater awareness needs to be raised amongst professional carers. As well as carers, other professionals such as occupational therapists, gas and electrical engineers, home improvement agencies and GPs, who are all likely to enter the homes of older isolated people, need to be made aware of the hazards posed by unsafe electrics in the home and how to identify them.

This multi-agency approach, promoting a preventative agenda, has the potential to identify dangers posed by unsafe electrics in the homes of older people. It is important that a joined-

The trustworthiness of a tradesperson is a high priority for older people:

A series of interviews with older people found “one of the participants’ greatest fears was that of letting strangers enter their homes”⁴⁸.

An Australian study also found that “a fear of vulnerability to overcharging, over servicing or their personal security” was a significant reason for older people undertaking DIY⁴⁹.

Case Study

Age UK, funded by Lancashire Fire and Rescue Service, carried out free electric blanket safety tests for older people in the area. 77% failed to meet safety standards, and needed to be replaced.

up approach incorporates home improvement agencies, charities, handyman services, the fire service and other relevant bodies. The new Care Act includes requirements for Local Authorities to provide information and advice⁶⁷ which can prevent the need for adult social care (suitable, safe living accommodation is important in this). These various agencies therefore can signpost older people who may have electrical hazards in their homes towards Local Authorities. Together this network can provide a '4th emergency service', knowledgeable in directing older people to a qualified electrician using the Competent Persons Register, or referring older people to their local home improvement agency if they need financial help with repair costs.

88% of professional electricians surveyed thought the homes of older people they visit are particularly likely to contain electrical hazards.

92% thought that older people are particularly vulnerable to electrical hazards⁶⁶.

Case Study

Olive Branch Training, through Staffordshire Fire and Rescue Service, targets people who are in contact with or visit vulnerable members of the community within Staffordshire and Stoke-on-Trent. It encourages them to identify potential fire hazards and other risks in the home. In addition the scheme highlights how to refer vulnerable people on to Staffordshire Fire and Rescue Service for a free home fire risk check.

Home Improvement Agencies and Handyperson Services – supporting a preventative agenda

- Handyperson services have an important role in providing low-cost, small scale electrical work in the homes of older people, promoting independent living.
- They can also signpost older people to Home Improvement Agencies, which can organise and part-fund larger electrical work.
- However budgetary challenges for local authorities mean that these services are under threat.

Home improvement agencies and handyperson services provide local support to older and vulnerable people, providing services to promote safe, independent living for as long as possible. 80% of local authorities in England currently are covered by a handyperson service or home improvement agency⁶⁸, with services offered such as offering technical support to specify any work needed, sourcing finance through charities or local grants and loans and minor home repairs through handyperson services.

Electrical work is the 4th most common use of handyperson services⁶⁹, and therefore these schemes have an important role in maintaining electrical safety in the homes of older people. Handyperson services are an effective and low-cost tool to enable safe independent living amongst older people by providing minor and major electrical repairs; 69% of service users felt they were better able to maintain their independence, and using even conservative modelling, the benefits achieved by handyperson programmes outweigh the costs by 13%⁷⁰.

The handyperson services' role in maintaining electrical safety is particularly important when considering the relatively unique position the UK finds itself in, with a high number of low-income home owners. Whilst many benefited from 'right to buy' policies in the 1970s and 1980s, a generation of older people are now having to pay for expensive repairs, which originally would have been met by housing associations or local authorities⁷¹. This may be having a damaging

Case Study

Warrington Home Improvement Agency (HIA) was commissioned by the local Clinical Commissioning Group (CCG) to run an integrated care pilot scheme, whereby the HIA would visit the homes of older people accompanied by a pharmacist. This scheme recognised the important connections between housing conditions and health and wellbeing⁷³. The agency also works closely with GPs; patients over 75 and/or housebound are written to highlighting the help available from the HIA, and prescription-sized flyers advertising the help available are attached to patient's prescriptions⁷⁴.

effect on electrical safety in the homes of older people. With the decline in inter-generational living⁷² and with family members often living long distances from older people, handyperson services can also provide the low-level support that family members would normally provide, such as replacing hard to reach light bulbs or fuses.

Handyperson services received financial support in 2009 when the Department of Communities and Local Government introduced additional, ring fenced funding to allow local authorities to either expand existing handyperson services or to develop new schemes⁷⁵. However funding for handyperson services is no longer ring-fenced, and no longer identified within the Formula Grant (the overall budget for Local Authorities)⁷⁶. With local government spending set to fall by almost 30 per cent in England between 2008 and 2015⁷⁷, both handyperson services and home improvement agencies have been left susceptible to reduced funding as councils look to make significant budgetary cuts; when surveyed, 40 per cent of local authorities expected funding for handyperson services to be reduced⁷⁸.

Funding for both handyman services and home improvement agencies have been affected by the removal of the Private Sector Renewal (PSR) grant. This grant, with money from central government funding, was offered by local authorities to vulnerable older and disabled private sector households for home repairs⁷⁹. This has put further financial strain upon handyman services which often relied on this grant for funding, raising concerns that electrical hazards are not being fixed in the homes of older people. In recent years the social rented sector has seen a marked improvement in the number of homes with electrical safety features installed, quite probably due to the requirement that all dwellings in the social sector conform to the decent homes standard. It is important therefore that help is available for people in the private housing sector, where the majority of older people live, to improve the safety and state of repair of their housing stock.

As well as reduction in services offered, older people are also facing increased charges for using handyman services, with less of the costs being met by central government funding. One local authority commented, “it is anticipated that

the provider will have to look at reducing capacity and increasing client contribution to the service⁸⁰”. The rising costs to service users mean that for the relatively high number of low-income older owner-occupiers in England, potentially life-saving electrical repairs could become financially out of reach. Low-income older owner-occupiers are the people most likely to live in poor housing conditions, with a million occupying non-decent homes⁸¹. So these changes in handyman services are concerning when attempting to improve electrical safety.

The Care Act

The Care Act 2014 set out the framework for the future provision of adult social care in England, and comes into effect from April 2015. Housing and accommodation is referenced throughout the Act, and with this new piece of legislation there is a greater requirement for local authorities to promote wellbeing and independent living amongst the adult population. With poor electrical safety an indicator of poor quality and unsuitable accommodation for older people, local authorities must consider the impact electrical hazards

Handyman services, electrical safety and the preventative agenda

During the Inquiry, a number of experts from the areas of housing and dementia identified the need to take a preventative approach to electrical safety. Concern over safety in the home is one of the most common reasons for older people to go into care, with admittance often arising after a ‘crisis point’ has been reached – an incident such as a fall, an electric shock or a fire. Therefore preventing these incidents through promoting high levels of electrical safety can allow older people to remain living independently for longer.

A review of handyman programmes states that “handyman services can and do support the preventative agenda⁸²” – for example replacing a broken light bulb can prevent a fall, or help a person with dementia who is sensitive to changes in lighting. Handyman services also have an important role in signposting older people to home improvement agencies, who have the ability to undertake larger scale projects which are outside the handyman’s capabilities, such as major re-wiring works.

may have on their older residents in their ability to 'age in place' safely.

Prevention features extensively in the Care Act, with local authorities obliged to provide services, resources and facilities which reduce, delay or prevent an individual's need for care. The hidden nature of many electrical hazards mean that prevention is particularly relevant; maintaining decent standards of housing and living accommodation can prevent electrical hazards developing in the home, which could be a factor in the decision for an older person to ultimately enter residential care.

A second important and relevant part of the Care Act is the statement that local authorities must "establish and maintain a service for providing people in its area with information and advice relating to care and support for adults and support for carers⁸³". The Act also states that this information and advice must go further than basic information regarding care, and "should also address prevention of care and support needs, finances, health [and] employment⁸⁴". This report has described how older people could be being placed at electrical risk through not being able to find a reputable, trusted tradesperson; and if a tradesperson is found, the costs for older people can be prohibitively expensive. The Care Act therefore should give local authorities the catalyst to offer older people advice on the financial help available to maintain homes to a decent standard, as well as practical advice such as where to find reputable tradespeople. This would meet the aims of the Care Act in promoting independent living, preventing the need for care, and offering advice and information in regards to both. The Care Act gives local authorities the opportunity to improve electrical safety in the homes of our older citizens, and to share and learn from good practice from other local authorities.

Whilst the Care Act certainly can promote good practice in providing advice and information, and acknowledges the relationship between housing

Case Study: Rotherham Social Prescribing Service

This pilot scheme ran from April 2012 to March 2014, and involved 28 GP practices. In the first 12 months 808 referrals were made, compared with a target of 625. The most common services prescribed to the 1400 patients and carers who used the scheme were community based activities, information and advice, community transport and befriending. Compared with the 6 months before the trial, A&E attendances were reduced by 21%, hospital admissions reduced by 9% and outpatient appointments reduced by 29%⁸⁷.

conditions and health and wellbeing, the Act on its own is not adequate to protect older people from electrical harm. Whilst it can be used to spur local authorities to take more responsibility in enabling older people to maintain home safety standards, clear legislation such as mandatory electrical safety checks every five years in the private rented sector is the best way to reduce injuries and fatalities from electricity in the home.

The social prescription model

This report has highlighted that electrical hazards in the homes of older people may be remaining unnoticed, leading to serious injuries or even fatalities. With families often living further distances away, neighbours and friends nearby are a valuable resource to look out for the warning signs of serious electrical dangers in the homes of older people who may have limited mobility or are unable to check themselves. However, older people may be reluctant to ask for help.

The 'social prescription' model may be a way of tackling this reluctance. Social prescriptions

have started being used to improve the well-being of marginalised groups, through preventative interventions; the idea being that these interventions may prevent ‘crisis points’ being reached which could result in costly specialist care⁸⁵. Social prescriptions are issued by primary care providers (GPs for example) and recommend, advise and ‘prescribe’ individuals to connect with charities, advice centres or activity groups which can improve wellbeing. Social prescriptions can link primary care providers and their patients with “non-medical sources of support within the community” such as charities or outreach programmes⁸⁶. A GP could, for

example, issue a social prescription which suggests community services which can improve wellbeing; examples include community transport, information and advice and befriending services.

Local Authorities, perhaps working with Fire & Rescue Services, can use this model to issue ‘prescriptions’ for older people who may be at risk from electrical hazards in the home. Older people then may feel more comfortable asking a neighbour to quickly check the electrical safety of their home, using a checklist which can advise of the warning signs that may be an indicator of electrical hazards.

Fusebox (consumer unit)

- 1. All covers are in place and fitted correctly (a damaged cover could lead to a shock or fire risk)
- 2. Residual Current Device (RCD)* trips when the test (or T*) button is pressed
- 3. Combustible materials are not stored on or near the fusebox (e.g paint, newspapers, cleaning fluids)

Electrical appliances

- 1. Appliances are not subject to a product recall (visit electricalsafetyfirst.org.uk/recall to check the appliances in your property)
- 2. All covers are in place and in a satisfactory condition (a damaged casing could lead to a shock or fire risk)
- 3. Flexible cables are in a satisfactory condition and show no sign of deterioration (e.g fraying/splitting)
- 4. Flexible cables are securely attached to the appliance and plug

Sockets and lighting

- 1. Sockets, lights and switches are securely fixed and in good condition (e.g not broken and cracked)
- 2. Sockets, lights and switches show no sign of overheating (e.g blackening, scorch marks)
- 3. Flexible cables are not in a position where they are likely to suffer damage (e.g under carpets or rugs, passing through door/window openings)
- 4. Sockets, are not overloaded with too many appliances (e.g inappropriate use of adaptors and/or extension leads)

Additional safety checks

- 1. Smoke alarm sounds when the test button is operated
- 2. Carbon monoxide alarm sounds when the test button is operated

Dementia, Electrical Safety and our Ageing Society

What is the situation today?

- All types of dementia have symptoms which provide challenges to maintaining electrical safety.
- Whilst two thirds of people with dementia live in the community, 80% of older people in a care home have dementia, indicating a need to focus on both environments.

The cognitive and neurobiological effects of dementia mean that electricity poses a heightened risk for older people with this disease. The Alzheimer's Society estimates that there are currently 815,827 people with dementia in the UK, and 773,502 are aged 65 or over. It is a progressive disease, meaning that the symptoms gradually get worse, and as well as memory problems, people with dementia are likely to experience declining communication, learning and problem solving skills⁸⁹. The older a person is, the more their chances of developing dementia increase, with the proportion of people with dementia doubling for every five year age group⁹⁰.

To improve electrical safety amongst older people with dementia, an appreciation of where people with dementia live is needed. The perception of an older person with dementia, both amongst the public and indeed policy makers, can be one of the very elderly in residential care, but in fact approximately two thirds live in the community⁹¹. But that is not to take focus away from residential care homes – 80% of older people in care homes have a form of dementia or severe memory problems⁹².

Where will we be tomorrow?

- Our ageing population means that there will be a significant increase in the number of people living with dementia.
- This brings with it an increased need to enable people with dementia to remain in their own

homes safely for longer.

- Changes in the structures of residential care increase the challenges of identifying electrical hazards.

As our population ages, an increasing number of older people with dementia will be exposed to dangers posed by electricity, both in their own homes and in residential care. The number of people living with dementia in the UK is expected to sharply increase as our population ages, from 800,000 people in 2014, to 1 million by 2021 and 1.7 million in 2051⁹³. This increase is exacerbated by the sharp growth of the 'oldest old' in our society. The majority of people with dementia, as well as their families, place high value on being able to remain in their own homes for as long as possible⁹⁴. Enabling people with dementia to remain in their own homes also can produce significant savings to the state in terms of care costs⁹⁵ - with this in mind, creating home environments with reduced electrical risks may potentially allow people with dementia to remain in their own homes safely for longer, helping to ease the challenges of a sharp increase in the number of people living with dementia in the UK.

Developments in the structures of sheltered housing and care homes also create challenges for the future. Extra care housing is an increasingly popular choice for older people⁹⁶, creating 'grey areas' in terms of electrical appliance testing⁹⁷. And whilst the increasing role of assistive technology brings with it certain safety benefits, any such technologies or devices should be provided as an integral part of support plans, as replacing human judgement completely with technology could result in social isolation, deteriorating mental health and an increase in false alarms which can waste the resources of emergency services⁹⁸.

How can the symptoms of dementia effect electrical safety?

- Memory loss, confusion and visual difficulties all increase risks from electricity in people with dementia.
- Sensitivity to temperature changes, tampering and sensitivity to lighting also increase risks.

Although ‘dementia’ is an umbrella term, covering a number of subtypes of dementia, memory problems are a symptom of most types of dementia. The most common early sign of dementia is declining short term memory – people with dementia also often become easily confused, suspicious or fearful, and struggle to absorb and process new information⁹⁹. The most common forms of dementia are Alzheimer’s disease and vascular dementia¹⁰⁰, with mixed dementia (i.e. a person having both Alzheimer’s and vascular dementia) being common. Symptoms of Alzheimer’s include memory loss, poor judgement, mood changes, trouble completing familiar tasks, and disorientation of time or place. Particular problems with vascular dementia include a decline in speed of thinking, concentration and communication, anxiety, memory loss and period of confusion. People with vascular dementia often experience a ‘step wise’ progression, for example following a stroke, and often experience hallucinations and make visual mistakes¹⁰¹. Whilst memory remain less affected for longer in Lewy Body dementia and dementia in Parkinson’s, the person may experience difficulties in attention, periods of confusion and hallucinations. Other types of dementia, for example in Frontal Lobe Dementia, may result in increased aggression and inappropriate behaviour, with memory worsening at a later stage.

Many symptoms described above raise concerns around potential electrical product misuse. One evidence giver at the event held as part of this Inquiry referenced the tendency for people with dementia to ‘fiddle’ with appliances, increasing the risk of electric shock. Around half of all accidental fires in UK homes have an electrical origin; 85% of these can be attributed to electrical appliances with product misuse being a major

cause¹⁰². The memory problems associated with dementia can also result in electrical appliances being left on for a dangerous length of time, as well as creating difficulties when advice is being given on electrical safety.

Sensory sensitivities can also increase the risks of electrical injuries amongst people with dementia. Often, sensitivity to temperature is a symptom of the disease¹⁰³ - this can result in appliances such as electric fires and electric blankets being left on for long periods of time. Both of these products have poor safety records, increasing risks of potentially fatal fires. Sensitivity to light can also be a symptom of dementia¹⁰⁴. This can be exacerbated by flickering lights caused by faulty electrics. Research has shown that this can result in agitation, headaches and even seizures amongst people with dementia¹⁰⁵.

Electrical safety in the homes of people with dementia

- The symptoms of dementia mean that it is important to make family members and carers aware of the increased risks electricity poses to people with dementia.
- Whilst carers instinctively take precautions, further awareness and training is needed.
- Dementia-friendly schemes can help people appreciate risks surrounding dementia and electricity.

The memory problems and cognitive impairments that are a symptom of all types of dementia mean that family members and carers have an important role in preventing electrical accidents in the home. With research finding that the majority of people with dementia live at home with environmental challenges and multiple hazards¹⁰⁶, awareness needs to be raised of the dangers electricity can possibly pose to people with dementia.

Carers often instinctively assess electrical safety hazards, but can be aided by a checklist, much

“There have also been many incidents of a plastic jug kettle being placed directly onto a hotplate, causing the kettle to melt and, unless full of water, to catch fire.¹¹³”

like the example used as a case study below, which can help in the identification of electrical hazards in the homes of people with dementia. Many carers are already aware of the danger electricity can pose to people with dementia – a study found that fire, water and electrical safety is the third most common concern for carers when leaving a person with dementia alone. Carers also instinctively take precautionary measures. In a survey, 79% of carers had taken at least one safety measure in the home of a person with dementia in the past year¹⁰⁸. With additional awareness and training, carers can potentially play a key role in identifying electrical safety risks in the houses of people with dementia. Particularly in the instances of advanced dementia, when it is often difficult to effectively communicate new information¹⁰⁹, it is more effective to allow another person to take preventative precautions around home safety in order to avoid confusion.

To encourage carers, families and the wider public to appreciate the challenges raised by people with dementia and electrical appliances, there needs to be further support for the growing appreciation of the benefits of creating dementia-friendly environments. Since the Prime Minister’s ‘dementia challenge’ in 2012, local authorities such as Bradford and Liverpool have made significant progress in raising awareness of dementia and improving support offered to both people with dementia and their families¹¹⁰. Utilising the expertise and experience of people with dementia to create safer environments can prevent injuries and deaths from electrical appliances. For example at the NHS Healthcare Innovation Expo, people with dementia passed on advice and knowledge to others about the

possible hazards in the garden – for example using solar powered lighting around the pond, and finding alternatives to using power tools¹¹¹. Other schemes such as ‘Dementia Friends’, run by the Alzheimer’s Society, aim to give people a better understanding of dementia. Dementia friends attend sessions to learn what it is like to live with dementia, and how to make communities and environments ‘dementia friendly’¹¹².

International Case Study

The Joint Commission accredits and certifies more than 20,500 health care organisations and programmes in the USA. The Joint Commission requires all home carers to perform a home assessment in the homes they visit. One of the four areas assessed is electrical safety – “home care providers instruct patients to recognize electrical hazards and correctly use electrical equipment”. The Joint Commission provides all carers with an easy to use electrical safety checklist, which is used to objectify a home safety score.

Ageing in place safely

- Enabling people with dementia to remain in their own home safely for longer is highly valued by older people and their families. This brings significant savings to the state.

Remaining in their own home is highly valued by both people with dementia and their carers. In a study by the Alzheimer's Society, 83% of carers and people with dementia said being able to live in their own homes was "very important"¹¹⁴. This also has economic benefits – for each month that 50,000 people with dementia can be supported to remain at home rather than in residential care, society as a whole could save £121 million from spending on care home costs (this takes into account both private and state contributions to care costs)¹¹⁵.

However the advantages of ageing in place for people with dementia become obsolete if this places them at high risk of injury and even death from electrical hazards. Research has found that a leading cause of older people going into care is concerns over home safety, including electrical safety¹¹⁶. Perhaps more significantly in instances of deciding whether a person with dementia is admitted to care, family and friends of older people place a high priority on concerns for their wellbeing, protection and safety¹¹⁷. With

the hazards from electricity posing a particular danger for people with dementia, taking preventative action in this area has the potential to allow people with dementia to remain in their own homes for longer.

The role of assistive technology

- Assistive technology can help people with early to moderate dementia maintain important daily routines, such as preparing food and cooking it, with a reduced risk. For later stage dementia, the use of assistive technology moves largely to risk management.

Small scale, low tech assistive devices can also be effective, with minimal cost, providing the devices are selected appropriately to meet individual need, maintained and reviewed regularly according to their effectiveness in meeting changing needs

Technical innovation in assistive technology can protect people with dementia against electrical hazards. Dementia friendly design in every day electrical appliances can save lives - the Inquiry has highlighted that the safety of many electrical appliances can depend on the user. An appliance

Assistive technology has the ability to manage and reduce hazards posed by electricity in the homes of older people. Examples include:

- Safety cut off devices for water, gas and electricity.
- Automatic switch off for electric cookers to prevent overheating.
- Electrical appliances with simplified controls, designed to be dementia-friendly.
- Lockable plug covers which ensure designated home appliances cannot be turned on when a carer is not present, for example microwaves, fan heaters and electric fires.
- Smart technology can monitor the use of electrical devices in the home of someone with dementia, helping detect deviations from daily routines.
- To combat the threat of electrical fires, heat detectors can send an alert to a carer's phone if triggered in the house of a person with dementia.

may have been tested and deemed safe, but misuse brought about by cognitive difficulties in a person with dementia may cause serious hazards. Therefore for assistive technologies to be effective in reducing risk from electrical appliances, there is the need for a comprehensive assessment, specific to each user, to determine the benefits of using a certain assistive technology.

Assistive technology will not automatically eliminate all risks associated with dementia and electricity. It is important that the technology is designed well – research has found that if home safety technology is obtrusive or inconvenient, older people are prone to alter them and leave them less effective¹¹⁸. It is also important not to discount the relatively small scale, ‘low tech’ adaptations to the home environment which can reduce hazards brought about by the cognitive difficulties of dementia. These include labelling electrical appliances with both pictures and words to aid identification, using devices where possible which only have one function and are easy to identify (for example a kettle), and placing clear instructions which can be easily followed in a visible place¹¹⁹. Evidence presented to the Inquiry highlighted that a simple sticker, costing 5 pence, placed over a plug socket warning the person with dementia not to touch the socket, is effective in preventing tampering¹²⁰. Overall the principles of inclusive design for the future should be built into all design – i.e. products should be safe and acceptable for the general public, including people with cognitive deficit. People with dementia often do not wish to use products that look different to those used by the general population.

The Inquiry highlighted the importance assistive technology can have in allowing people with dementia to maintain daily routines safely. Electrical appliances in the kitchen can pose particular hazards, especially increasing the risk of fire. Often the response from local authorities to reduce these risks for older people with dementia is to remove the appliances which could be responsible for a fire, such as electric

cookers¹²¹. However expert evidence gives at the Inquiry highlighted the importance of familiar daily routines for people with dementia. For example if an electric cooker is replaced with a ‘less hazardous’ microwave, valuable familiarity and routine is lost in preparing food and timing cooking. There the use of an assistive technology, such as extreme heat detectors which can send an alert to a neighbour or family member’s mobile phone, may be more appropriate to manage electrical risks¹²².

Utilising the priority service register

- Energy providers need to fully explain the benefits of the priority service register to both people with dementia and their families, as currently there is little awareness of the safety benefits of this service.

The priority service register is an existing service where at risk groups receive safety checks, which has the potential to protect people with dementia from electrical hazards. If there are concerns that an older person could be at risk from electrical or gas hazards in their home, they can be added to a priority service register. All energy suppliers have one, and individuals on the register are eligible for free regular safety checks and receive advice about safety measures¹²³. However whilst free gas safety checks are offered, there is no requirement to provide free electrical safety checks for older people on the register. There is also little awareness of the priority service register amongst older people. According to research into the effectiveness of the service, suppliers often add customers to the register without explaining the services and benefits that come with it¹²⁴. The symptoms associated with dementia mean that energy suppliers need to take a more proactive approach in advertising the safety benefits of being on the priority service register, as well as clearly explaining the service to older people with dementia and to their families and carers.

Sheltered Housing: ‘Beyond the Front Door’

- The symptoms of dementia can result in electrical appliances in sheltered housing becoming hazardous due to tampering.
- Changes in structures of care provision raise concerns over who takes responsibility for electrical safety in sheltered housing.

Sheltered housing poses a particular set of challenges in promoting electrical safety. Speakers at the Inquiry stated that whilst there are measures that can be taken in communal areas to maintain electrical safety, ‘beyond the front door’ and into an older person’s living area they have little authority. For example, there is no legal obligation to test electrical appliances at fixed intervals¹²⁵. Some Housing Associations, such as Hanover Housing, inspect appliances at each change of tenant – however this is non-obligatory good practice, rather than statutory obligation. As referenced in the Inquiry, ‘fiddling’ and tampering with electrical equipment is a common trait in many people with dementia, increasing the chances of electrical fires or shocks¹²⁶. Moreover due to the degenerative nature of dementia, high mortality means that sheltered housing may see a high turnover in residents – even if appliances are tested every few years, multiple people may have used the appliances, each with the chance of ‘fiddling’ and creating an electrical risk.

Whereas previously all services, such as the housing stock, equipment within the sheltered housing and the day-to-day running of the unit would be provided by one single provider (a charity or a local authority for example), it is not unusual now to have a fractured care structure with multiple agencies taking charge of each of these services¹²⁷. Experts presenting evidence at the Inquiry also warned of the problems of an over-reliance on technology – whereas previously a warden on site could identify whether the triggering of a fire alarm was indeed a serious threat or a false alarm, often the removal of this human judgement can mean that fire services are called out needlessly¹²⁸.

The role of care homes in promoting electrical safety for people with dementia

- With the symptoms of dementia sometimes resulting in tampering with electrical appliances, it is important that care homes regularly assess the safety of electrical appliances.
- This is particularly important, as electrical fires posing a heightened risk for older people due to their often limited mobility.

It is often a preference of both the person with dementia and their families to remain independent in their own home for as long as possible. However in most cases there will come a time when residential care is the best option for an older person with dementia; this is reflected in the fact that 80% of care home residents have a form of dementia or severe memory problems¹²⁹. If the time comes when a care home is the best option for an older person with dementia, it must be an environment that is as safe as reasonably possible.

There is currently no specific legal requirement for inspection and testing of fixed electrical installations (this includes wiring, socket outlets and switchboards) at set intervals in care homes, with the frequency decided by the individual care home¹³⁰. Whilst certainly many care homes will frequently test fixed electrical installations, it is important that care home providers are aware of the dangers of electrical fires. Electrical distribution units were the source of ignition in 4,200 dwelling fires in the UK in 2012/13¹³¹ - and when considering that a person over 65 is ten times more likely to die in a fire than a person aged 17-24¹³², untested electrical installations in care homes can have serious consequences.

Case Study: Rosepark Care Home fire

On 31 January 2004, 14 people died in a fire at Rosepark Care Home. The fire started due to an earth fault in a fuse box, located in a storage cupboard¹³³. The fire spread through the care home, with the frailty of many of the older residents a factor in the high fatality count. The fatal accident inquiry report stated that contributing factors to the deaths were maintenance of the electrical installation at the care home, the management of fire safety and the interaction between Rosepark and Lanarkshire Health Board¹³⁴.

Electrical appliances accounted for 4,600 dwelling fires in 2012/13¹³⁵. Whilst there is a responsibility for care homes to maintain electrical appliances, there is no obligation to test at set intervals¹³⁶. However setting a fixed time scale is difficult, due to the relatively regular turnover of residents within a care home, as well as a tendency amongst people with dementia to tamper with electrical appliances¹³⁷; therefore it is more sensible to raise awareness of this danger, and to encourage care home providers to regularly monitor the electrical appliances in their buildings.

It is true that a certain degree of risk can never be fully eradicated. However if policy makers are serious about responding to the Prime Minister's 'Dementia Challenge', then creating care home environments that minimise electrical hazards for people with dementia is vital.

Endnotes

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