Airis: protection for vulnerable people

Introduction and the facts

In the UK in 2013, the use of cooking appliances caused 18,000 fires, mostly hobs and ovens. Gas currently accounts for 61% of hob fires in the UK. (source: Department of Energy and Climate Change).

Gas will be phased out for sustainability, potentially increasing the number of cooking fires by up to 250%. This is because fires on electric cooktops are 2.5 times more likely to occur. (Source: NFPA Research: Home structure fires involving cooking equipment, Marty Ahrens, November 2017, USA.)

Based on these facts, overall, in the UK, the number of cooking related fires could more than double.

Induction hobs are another factor. A fire can ignite much more quickly with an induction hob than with any other kind. Induction hobs are now inexpensive and the most popular choice as they offer the convenience of staying clean and the ability to bring water to the boil more quickly.

Cooking is already the number one cause of home fires and at present the risk doubles for people over 80. 850,000 people are estimated to be living with dementia and this is expected to reach 2m by 2050 (source: Dementia UK).

Counting the costs beyond the risk of a fire

Taking away a person's ability to cook has major cost implications for local authorities. Eliminating the problem is a much lower cost option.

Cooking also has potential benefits for people with dementia. For further reading, refer to "cooking in a safe environment helped reduce passivity and agitation in adults in assisted living who had varying degrees of dementia" (source).

What does Airis do?

Airis cuts the power to prevent fire and smoke. It is uniquely able to react before a kitchen has filled with smoke, but not to interrupt normal cooking. The resident won't know it's there until it cuts the power.

How does Airis work?

Airis doesn't simply measure temperatures. It uses a unique multi-wavelength IR analysis patented by the manufacturer. This enables it to read the temperature of pans regardless of what they are made from – a significant step forward. It also has algorithms developed in real cooking situations using artificial intelligence and it is uniquely able to monitor cooking fumes (smoke and steam).

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Using Airis in the community

Airis can be installed in a home as a stand-alone device or connected to telecare. North Herts Careline, for example, have made this a standard practice. If a resident has a 'near-miss' and Airis cuts the power to the hob or cooker, the monitoring centre calls the resident to ensure they are OK. It could be, for example, that the individual has had a fall or is incapacitated for another reason. That said, the telecare connection is not essential. The main purpose is to keep the resident safe, prevent smoke alarm activations (and the subsequent calls to telecare centres) and fire service call-outs.

Using Airis in supported living

Airis is particularly suited to supported living schemes. Staff can be notified immediately when Airis activates (via SMS or email) and an easy-to-use web portal shows when and if a person has cooked. Dementia and other conditions can affect a person's sense of hunger and their circadian rhythm, resulting in them not eating or cooking at an unusual time e.g. during the night.

Installation

Installation requires a qualified electrician and takes 30-45 minutes. The power control unit (PCU) is wired between the power outlet and the hob or cooker. The sensor is wireless and mounted with very high bond tape, so there's no drilling and or wiring.

The Airis multisensor
(approx 16 x 4.6 x 2cm)

The Airis Wi-Fi Multisensor
(approx 18.5 x 32 x 2.6cm)

The Airis power control unit
Approx 23.5 x 11 x 4.3cm)

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