**Care home errors linked to medicine delivery method**

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Errors are common when care home staff help older people to use medical inhalers, research from the University of Leeds has shown.

A study across care homes in England has revealed that dosing mistakes are most likely to involve inhalers rather than tablets, capsules or liquid medicines, with inhalers being used incorrectly half of the time.

Dr David Alldred and colleagues are now calling for care home staff to receive better training in the use of medical inhalers so that residents with breathing disorders get the treatment that they need.

"Approximately one in 10 care home residents will have been prescribed an inhaler-based medicine for some sort of respiratory disorder, such as chronic obstructive pulmonary disease," said Dr Alldred, lecturer in pharmacy at the University of Leeds.

"If that condition is not treated correctly, their breathlessness will not be relieved and they may be at higher risk of developing a chest infection."

The researchers looked at data on 233 residents living in 55 care homes. They found that the chance of a mistake being made was 30 times higher when staff had to administer an inhaler rather than help a resident take some tablets.

Residents had a one in two chance of getting the right dose when they were helped to use an inhaler.

Also, the chances of an error occurring was four times higher when liquid medicines were administered rather than tablets or capsules.

Many mistakes involving inhalers happened because staff forgot to shake the device.

Dosing errors also happened when staff administered the wrong number of 'inhalations' or when residents failed to hold their breath, allowing the inhaled powder to escape out of their mouth.

"Medical inhalers are relatively complex devices and require a number of steps to be taken correctly in the right sequence.

Even the simplest inhaler can be difficult to use correctly and this is particularly the case for older people.

This is why care home staff need proper training and support in using these devices.

If that training is not being offered then we would urge them to seek support from their community pharmacist or Primary Healthcare Trust," Dr Alldred said.

The study was funded by the Patient Safety Research Programme of the Department of Health.

It was carried out in collaboration with the London School of Hygiene and Tropical Medicine, London and the School of Pharmacy, University of London.

Full details of the findings are published in the journal BMJ Quality and Safety.