

# Use of Protective Gear in Bird Flu Outbreak Response

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[Ted Pectorius] Hello. I'm Ted Pectorius and today, we're talking with Dr. Oliver Morgan, an Epidemic Intelligence Service officer at CDC. And we're talking with Dr. Morgan about some research he did in England prior to joining CDC. The research is about the use of masks and other protective gear used during an outbreak of bird flu in England and what impact such measures had on whether or not people got sick. The paper is published in the January 2009 issue of CDC's journal, *Emerging Infectious Diseases*. Welcome, Dr. Morgan.

[Dr. Morgan] Thank you.

[Ted Pectorius] Let's start by discussing a little bit about bird flu, or avian influenza as it's sometimes called. We all know people who've gotten the flu but what is bird flu?

[Dr. Morgan] Flu is caused by a virus. There are several different varieties of the flu virus. Some of these viruses affect humans, but others affect animals. When people talk about bird flu, they are often talking about the varieties of flu virus that affect ducks and chickens. Generally speaking, bird flu does not affect humans. However, occasionally people do get sick with bird flu, but this is very rare.

[Ted Pectorius] So why is bird flu such a concern?

[Dr. Morgan] At the moment, the viruses that cause bird flu do not easily infect humans. However, influenza viruses have the ability to change, and this change might make them more infectious to people. If a bird flu virus changes so people can pass it from one person to another, then this might lead to a worldwide outbreak or pandemic. Health experts are particularly worried by a type of bird flu virus known as H5N1 because there have been several documented human cases and many of these human cases have been fatal.

[Ted Pectorius] So what did your study look at, specifically?

[Dr. Morgan] Our study looked at an outbreak of a different type of bird flu virus called H7N3, which occurred in three chicken farms in England. Our investigation looked specifically at the effectiveness of protective gear, such as gloves, goggles, and facemasks, for people working to stop this outbreak.

[Ted Pectorius] And why is protective gear important?

[Dr. Morgan] Well, there are a number of different actions that people must take to stop outbreaks of bird flu and these actions can increase the risk of infection for people. To stop the outbreak spreading to other farms or even other countries, health officials prohibit the transport of any of these chickens or their eggs to other farms or areas of the country. In addition, they unfortunately have to kill all of the chickens – in this case about 45,000 in total - and incinerate

them to kill the virus. As an additional measure, health officials also have to decontaminate the farms.

[Ted Pistorius] And what did you hope to learn in your investigation?

[Dr. Morgan] Well, we wanted to see whether using the protective gear, as currently recommended for people working to stop bird flu outbreaks, really works.

[Ted Pistorius] What did you find?

[Dr. Morgan] In our study, we included 103 people who worked to stop the outbreak. Forty six of these developed symptoms that might have been caused by the bird flu. Most of those did not use protective gear properly.

[Ted Pistorius] And why wouldn't people use all the protective gear they could have?

[Dr. Morgan] Well, our study did not tell us exactly why people did not use the protective gear properly, but there are probably a number of different explanations.

Some of the workers might not have understood the risk from bird flu. Others might not have received proper training to use the protective gear. And it is also possible that the type of protective gear that was recommended was difficult to use in the conditions that the individuals had to work. For example, the temperature inside chicken houses is often very hot, and the goggles they used might have misted up or the masks could have made it difficult to breathe.

[Ted Pistorius] I can see that this could be a big issue for people who are working with sick chickens. What do your findings mean for future outbreaks of bird flu?

[Dr. Morgan] I think there are two main implications. First, health authorities must encourage workers to use the protective gear properly. This should include training workers about how to use the protective gear and having somebody from the health authority at the outbreak to provide advice and ensure compliance. Second, we must look and see whether we can provide protective gear that workers find easier and more comfortable to wear during bird flu outbreaks.

[Ted Pistorius] Well thank you for taking time to speak with us today, Dr. Morgan. We've been speaking with Dr. Oliver Morgan of CDC about his paper which appears in the January 2009 issue of CDC's journal, Emerging Infectious Diseases. You can see the whole article online at [www.cdc.gov/eid](http://www.cdc.gov/eid). And, if you'd like to comment on this podcast, please send an email to [eeditor@cdc.gov](mailto:eeditor@cdc.gov). As always, thanks for listening.

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