

## Tackling influenza in Ghana

Knowing the burden of disease is just one of a number of influenza-related issues countries such as Ghana have to face. William Ampofo spoke with Ben Jones about projects aimed at combating the virus in the African region.

**Q: Do African countries need the same level of flu vaccination as believed to be beneficial in non-tropical parts of the world?**

**A:** Most countries don't have a clear idea of what the influenza disease burden is like. If you take the countries in sub-Saharan Africa, because they are located either side of the Equator, it's difficult for them to decide which vaccine to choose: the northern hemisphere or the southern hemisphere.

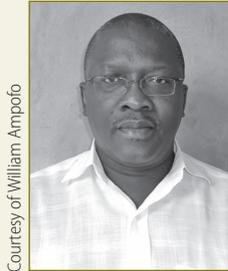
All this is based on having other competing health priorities like malaria, TB, HIV, and even if you look at just my country Ghana, for example, when you take the stats that are reported, you have 'acute respiratory illness' and within that category you can have bronchopneumonia, pneumonia, severe pneumonia, but you don't have a proportion attributable to influenza.

Our expanded programme of immunization has hitherto not considered rolling out an influenza vaccine. But I guess most countries have become more aware of the need for an influenza vaccine because of the pandemic [in 2009]. So you find that in the past three to four years, surveillance has increased for influenza.

**Q: How can the African region address the problem of not knowing what the burden of influenza is?**

**A:** Here the World Health Organization (WHO) is playing a good role. Countries have been encouraged to set up national influenza laboratories and increase their capacity for laboratory diagnosis of influenza. WHO's Regional Office for Africa in particular has pushed and also suggested the use of existing laboratory networks such as those for polio and HIV. In Ghana, we have influenza being part of the integrated disease surveillance response strategy through the Ghana Health Service, and also in line with the international health regulations (IHR) 2005, where there's a concerted effort to get countries to implement the IHR.

This is an incentive for the African region to improve its disease surveillance network, and some countries have used both the internal and exter-



Courtesy of William Ampofo

William Ampofo

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nal resources that have come through pandemic influenza and also set up surveillance for influenza, so you find that there is more information now about the virus circulating. Therefore, countries have realized the need to better estimate influenza disease burden. So again, looking at Ghana for example, we've taken part in the desktop pilot for a draft WHO manual for disease burden, fully supported by our Ministry of Health. We're looking to do a population-based study on influenza and other diseases like malaria, TB and HIV, with support from the Centers for Disease Control and Prevention (CDC), with technical input from WHO. We're looking to do a specific study on pregnant women and their children, and to look into disease burden in those children and use this as the foundation to develop a vaccine efficacy study.

Two or three years down the line, we will see evidence that it [influenza] is being tackled. Also CDC, with WHO's input, has set up ANISE, the African Network for Influenza Surveillance and Epidemiology. It's already met three times. These meetings have enabled people to discuss influenza-related surveillance work that is ongoing in Africa.

**Q: Do you feel that where there is high HIV prevalence, there is a greater need for widespread influenza vaccination?**

**A:** The interactions between flu and HIV are unknown, because many countries in Africa don't know the burden of

influenza. So actually now there are a couple of studies that are trying to look at the issue. The general advice is that yes, people who are immunosuppressed would be more susceptible to flu but we need evidence to convince the countries that flu vaccine would be a good strategy to help keep immunosuppressed people healthy.

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**Q: Have influenza vaccines not been widely-adopted because governments feel there is no 'return on investment'?**

**A:** Perhaps it's the other way around. They feel that there has so far been no compelling evidence for disease burden, which would then boil down to cost-effectiveness. Remember, unlike the other childhood preventable diseases, where you get a shot or two shots and then you are good to go, with the influenza vaccine you need a shot every year. The cost-effectiveness is really a critical element, I think.

**Q: What effect does not having seasons, in the traditional sense of the term, have**

on the epidemiology of influenza in the African region?

A: We don't have the four seasons of autumn, winter, spring and summer, but we have a rainy season and a dry season. There have been a couple of studies looking at the relationship between flu virus circulation and the tropical climate.

Now, although data from Senegal shows that they have flu in the rainy season, we are now trying to look at patterns of the flu virus in Senegal and other countries in sub-Saharan Africa which have a dry season and a wet season. The data is not clear, but we're in February now, so we've just had a dry season which runs from October to January, so those are the times when people present with a lot of upper respiratory tract infections, because during this time we have the north-east trade winds: dry, dusty winds blowing from the sub-Saharan.

In the local language in Ghana they call it a 'catarrh', so they have a cough, running nose and some people have headaches, but surprisingly, this past dry season, we've had very little flu!

It just shows that we need more studies over a longer period of time, to see an association with flu virus and seasonality in terms of the local climate.

*Q: There are quite serious concerns in Europe about a strain of H5N1 that could be transmitted between humans. Are those concerns shared in the African region?*

A: Yes they are, because if you take the H5N1 outbreak [in 2006/2007] that was a wake-up call for many countries, especially in western Africa. There were widespread infections in poultry in Nigeria, we saw it in Ghana, we saw it in Côte d'Ivoire, almost every west African country experienced H5N1.

The economic consequences of the outbreaks in poultry were horrendous. And the public fear, based on reports from international media, about the possibility of transmission to humans was a big issue for governments to deal with, so they had to devote resources to public health messages and pandemic preparedness.

*Q: How do you feel that, in Ghana specifically, the media handled the outbreak, and how did they relate the information to the public?*

A: In Ghana, I think there probably was some sensationalism, by some FM stations wanting to report stories of poultry outbreaks. At least in Ghana, the media were given training; there were messages that were being produced by the Ministry of Agriculture and the Ministry of Health. Those messages were aimed at promoting better health and better handling of animals, to avoid any human cases of avian influenza.

But, unfortunately, those messages made people more fearful of pandemic influenza. So when pandemic influenza was declared by WHO in 2009, it was a real big issue because of the previous fear of H5N1. So the lesson we learnt was that we needed to update the messages and constantly do better risk communication. Some journalists would go to the internet for sources, and this was really catastrophic when it came to the introduction of the pandemic vaccine because now some people were saying the vaccine was dangerous, and there were rumours that people had died after getting the vaccine.

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But on the other hand, the fear of pandemic influenza made other people more eager to get the vaccine. For example, the World Cup was happening in South Africa at the time and South Africa has a winter, so people who wanted to go and watch the World Cup had to go and get the pandemic flu shot.

*Q: If you had to devise an ideal flu communication strategy for Ghana, how would you go about it?*

A: In Ghana we've done workshops with the media, thanks to both the Ghana Ministry of Health and external funders. We've used existing tools, and modified them to suit local content, local traditions and local perceptions.

We recognize the need to modify the approach and strategy in line with the existing situation.

For example, there's a movie called Fatal Contact, and we're using that as the model to develop our own video in Ghana so that we'll use that for simulation exercises, and also for public education and for training on pandemic preparedness strategies.

*Q: Tell me more about Ghana's pandemic plan.*

A: In Ghana, our pandemic plan is coordinated by the National Disaster Management Organization, which is an agency in the Ministry of the Interior which has the mandate to work with disasters. So a review of the plan had showed that we lacked certain standard operating procedures; there were certain gaps. So recently we had a couple of projects with the German Agency for International Co-operation, to strengthen the public-private partnership in pandemic preparedness.

This project has a specific target like the police, the military, the revenue collection agencies, who already have an interesting concept called the 'Employee Wellbeing Programme'. So what they've done is integrated influenza pandemic preparedness, so they have a business continuity plan for pandemic preparedness.

*Q: Do you feel there's enough publicity around influenza in the African region?*

A: I don't think the African region gets enough publicity but we know that the media will run with stories that will catch the eye of the public. If there's a new pandemic flu in the US, it's not a big story because it has nothing to do with Africa. But if there are some pigs from the US which have been imported to Africa and pigs in Africa started dying, then it would be. But the pandemic has come and gone.

*Q: If another pandemic arrived, how prepared would countries like Ghana be?*

A: I think the experience of 2009 was useful. My interaction with other countries shows that the surveillance for flu has not been a singular project. [The pandemic] has strengthened the capacity of the disease surveillance system in most countries that had a preparedness plan and had some resources. I think that's an advantage for the health system and public health in general. ■