

EBOLA VIRUS – AN UPDATE

Meeting of the Parliamentary and Scientific Committee on Tuesday 4th November

The situation in Africa (and the threat for the UK) persuaded us to organise a briefing meeting at very short notice. An early morning meeting was held on Tuesday 4th November, summarised below by Professor Alan Malcolm.

We were delighted to welcome:

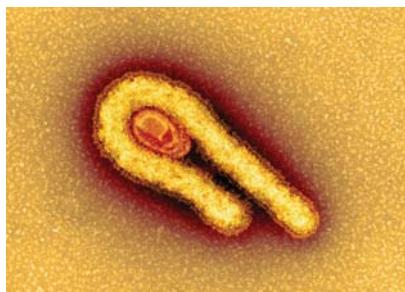
Professor Dame Sally Davies, Chief Medical Officer, England

Dr Christine McCartney (Director of Microbiology)

Dr Andrew Simpson, Public Health England

Professor John Edmunds, Dean of Faculty, Epidemiology and Population Health, London School of Hygiene and Tropical Medicine

Dr Huw Taylor, Professor of Microbial Ecology, University of Brighton



The following points were made in answer to questions from the audience:

WHERE HAS THE DISEASE EMERGED?

HOW WERE PAST EPIDEMICS ELIMINATED?

There is almost certainly an Animal reservoir.

This may be fruit bats or possibly monkeys.

Eating bush meat is a likely entry point into humans.

In the past such epidemics affected rural communities.

A combination of excellent public health, coupled with early diagnosis and isolation enabled the epidemics to be kept under control.

The difference here was that it broke out in a new part of Africa.

It took time to identify, by which time disease had spread.

There was also significant transmission in hospital.

The Reproduction Number is the number of cases which each patient then infects. For the current outbreak this is currently 1.4. Anything above 1.0 is worrying.

Isolation is easy if there are only a few cases, but very difficult if there are many cases.

Transmission then takes over.

A large part of the daily work of the CMO is myth busting. There has been far too much scaremongering. There is no need to cancel flights to affected countries, and indeed this would deny them access to skilled help, thus aggravating the situation. The affected countries have excellent exit screening, and the UK has appropriate

entry screening, together with follow up and monitoring where necessary. However all such surveillance is kept under constant review.

HOW DO YOU CATCH IT?

It can only be caught by intimate contact with bodily fluids, especially blood.

It is not airborne and as an RNA virus it will not mutate. It is not like influenza which mutates all the time.

Bleeding from wounds is particularly dangerous, and many burial practices are very "dodgy" to say the least.

For example, two burials in Sierra Leone infected a further 68 people.

A lot of work had gone into working with the community to educate them. Sadly hospital workers and burial workers are at greatest risk.

However the organism is very fragile, and will not survive long outside the human body. While its survival will depend on precise conditions, it will not live on hard surfaces.

Dealing with faeces is a very particular problem.

Corpses are buried in a double layer of tough polythene.

BRITAIN'S CONTRIBUTION

The NHS does not recruit from West Africa and we hope that our NHS staff will volunteer.

It is essential that recruits understand the culture as well as the

disease. Volunteers undergo two weeks training at Porton Down. We can be proud of the contribution which the UK is making – probably more than the rest of the EU put together, although other countries are increasing their input significantly.

Britain has not only provided health care workers, but our military contribution has been huge. In addition to the provision of helicopters, our soldiers have been building hospitals and isolation units.



We have also led in the modelling of the disease progression and transmission.

Our Public Health Laboratory Service is unique in having two high category facilities to enable research to be undertaken.

In Liberia, it is the US which is the lead country.

One concern is social breakdown in UK communities. There have been suggestions of banning some children from school.

SCIENCE AND THE TRUTH

The CMO emphasised that the only way to deal with such incidents is to emphasise the scientific truths.

Three potential vaccines are well under way in development and testing.

However there is still a great shortage of hospital and isolation beds. We may need hospital ships.

The safety of medical workers also gets in the way. Médecins Sans Frontières will not allow intravenous rehydration, because of risk to workers.

There is a shocking lack of research into support care for patients. Rehydration is vital, and not enough work has been done on how to achieve this.

It is important to remember that other haemorrhagic fevers also need vaccines. The US is doing a lot of work in this area.

Previous outbreaks have been contained by public health measures.

Because they were mainly in rural areas, contact tracing was possible.

Now the disease is in urban areas, contact tracing is not usually possible.

Early diagnosis is essential, but such tests need to be sensitive and specific.

A false positive could be a death sentence.

We need to perform such tests quickly and transmit the results rapidly.

Because few have survived the disease, it is too early to know whether sufferers can contract the disease again.

The CMO confirmed that tackling antibiotic resistance should be regarded as one of our millennium goals.

DEFENCE

Defence against Ebola requires soap, water and chlorine. It would be a mistake to change a routine which is effective. Changes often give rise to new errors.

It was not necessary to provide immigration officers with protective clothing. The system deals with those who become ill on the plane. If the traveller is not showing symptoms then (s)he is not a hazard. Those returning are told to take their temperature twice a day, and report any untoward symptoms.

Similarly, our knowledge of ship movement and arrivals enables appropriate monitoring to be in place.

In November, 316 returning passengers were being followed up.



One major issue in affected countries was the effect of diminishing other aspects of health care. Vaccination programmes were being seriously affected. It could even give rise to other major epidemics as a result.



We (and the WHO) were undoubtedly too slow to respond in the early days of the outbreak. We will be quicker next time.

The Congo has revised its funeral practices.

Modelling has now been done to anticipate outbreaks in major centres of population.

All the speakers were thanked for giving such information and assurance in only 70 minutes.