Scientific Advisory Group for Emergencies - Ebola

Summary Minute of 3rd Meeting
8 December 2014
35 Great Smith Street, London

List of attendees

Chairs

Sally Davies	CMO
Mark Walport	GCSA

Attending

Paul Cosford	PHE
John Edmunds	LSHTM
Neil Ferguson	Imperial
Peter Grove	DH
Simon Hay	University of Oxford
David Lalloo	Liverpool School of Tropical Medicine (via telephone)
Melissa Leach	Institute of Development Studies (via telephone)
Peter Piot	LSHTM
Andrew Pollard	University of Oxford (via telephone)
David Salisbury	
John Simpson	PHE
Alasdair Walker	MOD
John Watson	DH
Chris Whitty	CSA, DFID

Officials & Secretariat

Colin Armstrong	GO-Science
Phil Green	Wellcome Trust
Claudia Lally	GO-Science
Alex McLaughlin	DH
Ruth Parry	DH
Anne Philpott	DFID
Marsha Quallo-Wright	GO-Science
Elizabeth Surkovic	GO-Science
Hannah Thomson	Cabinet Office
Chloe Watson	Wellcome Trust

ACTIONS

1. **CMO** to liaise with CDC about the design of the proposed vaccine clinical trial in Sierra Leone.

2. **John Edmunds** to provide SAGE with findings from serological study in DRC.

3. **Modelling sub-group** to agree whether to base weekly case data in the indicative future scenarios slide on sitrep or line-list data (or both) and to feed back to the SAGE chairs.

4. **Modelling sub-group** to ensure that the format of the indicative future scenarios slide remains consistent over the coming months and to ensure that the actual number of beds is included as well as the planned numbers.

5. **DFID** to draft a letter for **CMO** to send to WHO regarding guidance on water, sanitation and hygiene practices outlining proposed steps to answer questions on whether the virus survives in sewage.

AGENDA ITEM 1: WELCOME

GCSA welcomed participants to the third meeting of the Scientific Advisory Group for Emergencies on Ebola. He reminded participants that the purpose of the meeting was to discuss the design of vaccine clinical trials and to provide advice on the likelihood that the disease will spread to other countries.

AGENDA ITEM 2: VACCINES

Trial Design

Vaccines were currently being developed by GSK, Merck (previously NewLink), and Johnson & Johnson. Phase I trials for the Johnson & Johnson vaccine were due to begin in Oxford in mid-December.

The US National Institute for Health (NIH) was leading on the planned phase II and III trials in Liberia, a consortium led by the Norwegian Government was leading on the trials in Guinea, and the US Centers for Disease Control and Prevention (CDC), with significant logistical support from the UK, was leading on the trial in Sierra Leone.

The proposed design for the Sierra Leone clinical trial was discussed. It was suggested that it could be beneficial to add a boost arm to the trial.

SAGE provided clear advice that the most appropriate design for the study in Sierra Leone would be for all trial participants to receive the Prime dose of the vaccine, with the provision on the Boost being randomised. This was based on initial evidence suggested that two of the three vaccines (including the most advanced) would require boosting to provide the necessary protection.

Health Care Workers

CMO highlighted that discussions were underway to explore whether vaccines trials could be developed that included UK healthcare workers. A letter had been developed outlining an additional phase IIa trial be conducted with UK healthcare workers, to investigate prime boost vaccination. In addition, an Innovative Medicines Initiative proposal had outlined a phase II study that would allow UK healthcare worker participation.

In discussion, the following points were raised regarding the design of clinical trials:

- Studies would need to determine the best interval between a prime and boost dose. The Johnson & Johnson studies would be looking at one and two month intervals. Shorter intervals between prime and boost doses would be investigated in an additional phase I trial.

- How a step-wedge trial design could be used to investigate prime-boost vaccination. Ring vaccination was highlighted as an alternative option to this design.

- A serological study was being conducted in DRC to examine sero-positivity in recovered patients. John Edmunds agreed to provide SAGE with findings from the study.

- It was questioned whether recruitment of healthcare workers to the trial would be sufficient given that no healthcare workers had contracted Ebola for two months (previously levels were 10%).

AGENDA ITEM 3: MODELLING

Disease spread in Africa

The probability of cases spreading to other countries in West Africa and their ability to cope with an outbreak was discussed. The difficulty in modelling the spread of disease in Africa, based on scant data, was acknowledged.

Whilst the Index for Risk Management (INFORM) coping capacity indicator gave a good proxy for whether a country could deal with an outbreak it did not take into account the Ebola specific interventions that countries in West Africa had introduced since the outbreak. It was expected that these countries would have an improved ability to deal with outbreaks.

The GCSA stated that the limitations of this analysis should be stressed when presenting the findings to other groups.

Consensus statement

The latest version of the Ebola Modelling Group Consensus Statement was presented.

It was noted that there had been a general decline in the number of cases in Liberia, with substantial geographical variation. In Guinea, the number of cases was reported to have plateaued but with local variations. In Sierra Leone, the data suggested that cases were still increasing, with a slight lengthening in the doubling time.

Transmission close to death and around the time of burial was considered to be more important than previously thought. The need to focus on the transmission that occurs in the few days before death, in addition to transmission during burials, was highlighted.

Current data indicated that as the number of beds available in treatment centres had increased, the reproduction number had decreased. However, this could not necessarily be deemed causal.

The GCSA requested the modelling group to discuss whether to use the weekly case numbers from the sit-rep or the more accurate WHO line list data in the modelling slide.

False-negatives

SAGE noted that the case fatality rate for individuals reported as ‘not a case’ in the line-list data was almost identical to the case fatality rate among confirmed cases and the weekly incidence of cases in the two groups was also highly correlated (92%). SAGE agreed that this potential false-negatives issue was a cause for concern and should be investigated further.

AGENDA ITEM 4: SURVIVAL OF EBOLA VIRUS

A paper from the World Health Organization (WHO) and UNICEF on water, sanitation and hygiene was discussed. The recommendations for safe distances between latrines and water sources, particularly in relation to the transmission of other waterborne diseases were discussed. It was agreed that better information was needed regarding natural flow in urban areas, and confirmation was needed around Ebola Virus survival in sewage.

The Department for International Development (DFID) agreed to draft a letter for CMO to send to WHO, regarding the guidance on water, sanitation and hygiene practices, outlining proposed steps to answer questions on whether the virus survives in sewage.

AGENDA ITEM 5: CEILING OF CARE FOR EBOLA PATIENTS

CMO provided an update on discussions with clinical experts from the four specialist infectious disease units in the UK to discuss evidence around the benefits of offering level 3 care to Ebola sufferers in West Africa. These experts had endorsed the recommendation that rehydration treatment, such as that used in Kerrytown, was the optimal intervention and that there was little evidence about the effectiveness of higher level interventions. A letter outlining these recommendations had been published on the Lancet website.

AGENDA ITEM 6: SOCIAL SCIENCE AND ANTHROPOLOGY

Melissa Leach updated the group on the work of the Anthropology platform:

- Evidence was being gathered on practices and behaviours around burials and the days immediately before and after death.

- Liberia's mass-cremation policy was causing concern and may be resulting in increased under-reporting, inappropriate burials and a growing black market for Ebola-negative death certificates.

- There was a concern that many Ebola survivors are being stigmatised, making it difficult for them to re-enter communities. The use of a punch card transition, with multiple recognised stages, was suggested as one possible intervention to aid the reintegration of survivors.

- Communication around safe practices should continue, even if there was a decline in the number of cases.

AGENDA ITEM 7: AOB

An exercise involving the Devolved Administrations was planned for w/c 8 December.