

Conclusions of the fourth CONSIZE international meeting

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The Consortium for Standardization of Influenza Seroepidemiology (CONSIZE) held its fourth international meeting in Cape Town in September 2013. Conclusions of this meeting and influenza seroepidemiology protocol templates of different study designs are now available on the CONSIZE website: <http://consise.tghn.org/>.

After the 2009 influenza pandemic, it was recognised that there was a need to provide more timely and standardised influenza seroepidemiology results to inform decision making [1,2]. This was the stimulus to form CONSIZE. This consortium is composed of globally recognised experts and institutes who are interested in the standardisation of seroepidemiology for influenza and other respiratory pathogens. There are currently more than 100 members of CONSIZE based in more than 45 countries. CONSIZE has two (epidemiology and laboratory) integrated working groups. Background information and the organisation of CONSIZE can be found on the CONSIZE website.

The main task of the epidemiology working group is to generate detailed study protocol templates to evaluate the seroprevalence of seasonal, pandemic and zoonotic influenza viruses in specific human populations. So far, seven influenza seroepidemiology protocol templates of different study designs have been drafted and three are available on the CONSIZE website at <http://consise.tghn.org/articles/available-consise-influenza-protocols/>. The templates are based on detailed epidemiologic protocols used previously by members of CONSIZE in a range of situations across the globe. In addition, several of these protocols have been adapted for respiratory pathogens other than influenza, such as the Middle East respiratory syndrome coronavirus (MERS-CoV). The working group is also developing a question bank, which holds a collection of questions under major categories (e.g. demographic, background medical history, animal exposures, healthcare facility exposures, etc.) to facilitate the rapid development of questionnaires that should be used in conjunction with each of the protocol templates. An online interface will

be developed that allows downloading specific questions into questionnaires.

One of the main tasks of the laboratory working group is to coordinate and standardise the international serology laboratory response to a new emerging influenza virus. The group has developed two consensus protocols for the microneutralisation (MN) and the haemagglutination-inhibition (HI) assays. A comparative influenza A(H1N1)pdm09 virus study to compare results and to assess reproducibility between laboratories using the agreed HI and MN consensus protocols will be conducted during 2014 and a small study group will be established to develop the detailed study protocol. It was agreed that either the two-day or three-day MN assays could be used in the study and various sources of potential antibody standards will be evaluated.

CONSIZE has responded to emerging respiratory virus threats such as influenza A(H7N9), A(H5N1) and MERS-CoV. HI and MN assay protocols developed for influenza A(H7N9) by the Chinese Center for Disease Control and Prevention (CDC) and the United States CDC have been shared through postings on the Internet. Several of the CONSIZE protocol templates have been adapted for MERS-CoV and are available on the World Health Organization (WHO) and CONSIZE websites (<http://consise.tghn.org/whats-new/>). CONSIZE plans to generate a consensus statement for the recommended serological assays, timing of sample collection and criteria for seropositivity for highly pathogenic influenza A(H5N1) seroepidemiological studies. The full report of CONSIZE's activities and achievements to date is available on the CONSIZE website [3].

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