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SÉMINAIRE

The R Epidemics Consortium: building the next generation ofnstatistical tools for outbreak response using R

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The recent West African Ebola outbreak has been a terrible reminder for the need to gain timely situation awareness, in order to inform and guide public health intervention and maximise the chances of mitigating disease outbreaks. Unfortunately, many tools are still lacking for addressing the challenges, both statistical and technical, posed by the analysis of outbreak data. This presentation will introduce the R Epidemics Consortium (RECON), an initiative bringing together public health officers, statisticians, modellers and software developers to develop a new generation of tools for outbreak response using the R software. We will argue that R is a platform of choice for the development of cutting-edge methodology which can further our understanding of disease dynamics. This point will be illustrated using outbreaker2, a new R package for reconstructing disease outbreaks using various kinds of epidemiological and genetic data. We will also show how R can be used for addressing some of the more technical challenges inherent to the outbreak response context, taking the packages incidence and epicontacts as examples. We will conclude by reflecting on how the typical life-cycle of methodological development is altered during emergency outbreak response, and on what novel practices may be considered to address some of these issues.http://repidemicsconsortium.org/ Keywords: methods, R, statistics, software, RECON, tools

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