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Study examines long-term adverse health effects of Ebola survivors

Largest long-term study to date examines survivors of 2007-2008 outbreak in Bundibugyo, Uganda

April 22, 2014 (SILVER SPRING, Md.) –Ebola survivors experienced negative health effects that persisted more than two years after the 2007-2008 *Bundibugyo* ebolavirus (BDBV) outbreak in Uganda that claimed 39 lives. These findings are detailed in a paper published online today in *Lancet ID.* This represents the largest long-term study to-date on Ebola survivors, and examines health events more than two years after initial exposure to BDBV.

"Defining EVD-related health consequences could help improve patient care for survivors," said Dr. Hannah Kibuuka, the principal investigator on the study in Uganda with the Makerere University Walter Reed Project.

Researchers studied forty-nine probable and confirmed BDBV adult survivors and 157 of their seronegative contacts in this observational study that enrolled volunteers 29 months after the outbreak. Information on health status, functional limitations and demographics was collected, along with blood samples for analysis.

Researchers found that survivors were at significantly increased risk of ocular deficits, blurred vision, hearing loss, and neurologic abnormalities such as difficulty swallowing and sleeping. Survivors also reported more chronic health problems and limitations due to memory loss or confusion.

Limitations in the ability to perform routine functions were more prevalent among BDBV survivors. In addition, survivors were twice as likely to report having chronic health problems lasting more than a year. These included pain in the abdomen, back, and large joints, fatigue, impotence and severe headaches. Limitations due to memory problems or confusion were approximately six times more prevalent among BDBV survivors than uninfected participants of similar age and sex.

"Many diseases, such as Ebola, severe sepsis, dengue, and others are thought to put survivors at increased risk of persistent health problems, but further research is needed," said Dr. Danielle Clark, lead author on the paper and deputy director of the Austere Environments Consortium for Enhanced Sepsis Outcomes at the Naval Medical Research Center.

This study was limited to adult survivors. Since the long-term health effects experienced by children following severe disease likely differs from that of adults, researchers said that additional studies are needed to determine the health needs for children who survive EVD.

"The ongoing Ebola virus disease outbreak in West Africa has resulted in thousands of fatalities, but also thousands of survivors. The limited evidence from this study and the work of others indicates that strategies to address the long-term health needs of survivors are needed," said COL Nelson Michael, director of the US Military HIV Research Program at the Walter Reed Army Institute of Research.

Makerere University Walter Reed Project (MUWRP) of Kampala, Uganda conducted this long-term retrospective cohort study in collaboration with the Uganda Ministry of Health and the district health care workers in Bundibugyo. Initially established to study HIV vaccines by the US Military HIV Research Program at the Walter Reed Army Institute of Research, MUWRP also conducted the first Ebola vaccine study in Africa and is currently testing a Chimpanzee Adenovirus Ebola vaccine candidate with the NIAID. For more information, visit www.muwrp.org

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About MHRP

The US Military HIV Research Program (MHRP) at the Walter Reed Army Institute of Research conducts research to develop an effective HIV vaccine and integrates prevention, treatment, diagnosis and monitoring as part of a global effort to protect troops and reduce the impact of HIV worldwide. MHRP has developed six state-of-the-art international research sites in the Africa and Asia. In 2009, MHRP announced results of an Army-sponsored clinical trial in Thailand that demonstrated for the first time a modest ability to protect against HIV infection, reducing the number of infections by 31.2 percent. The program successfully collaborates on HIV prevention care and treatment services, funded by the President's Emergency Plan for AIDS Relief (PEPFAR), with African militaries and in the communities where it conducts research. For more information, visit www.hivresearch.org or find MHRP on Facebook, www.facebook.com/hivresearch, and Twitter at @MHRPInfo.

About the Walter Reed Army Institute of Research (WRAIR)

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