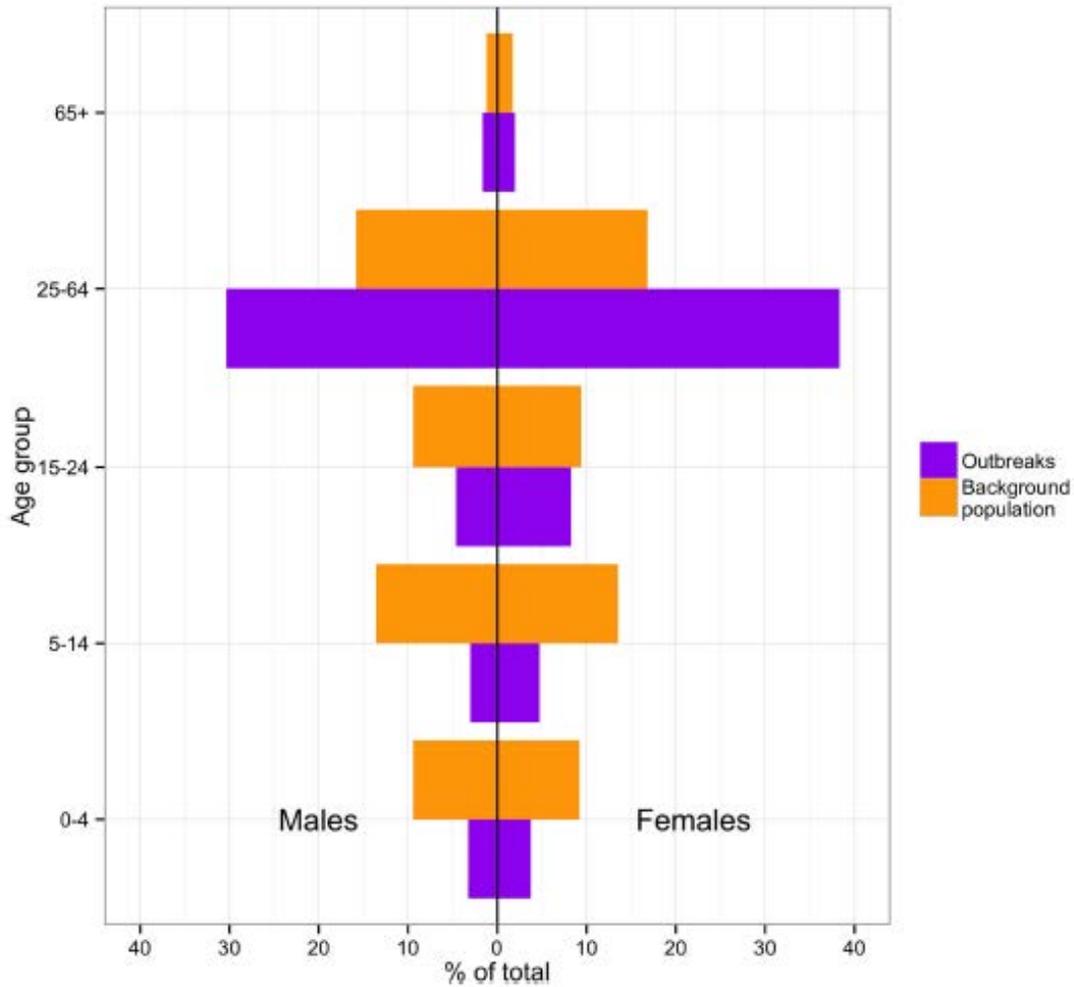




Age Structure of Ebola Outbreaks



Caption: Cases of Ebola virus disease (EVD) in the Democratic Republic of the Congo (purple bars) are grouped by age and sex and are compared to the demographics of the background population (orange bars). The data represent 996 suspected, probable, or confirmed cases of EVD documented during the seven Ebola outbreaks that occurred between 1975-2014 and the background population from 1976-2010.

BACKGROUND INFORMATION

Ebola virus disease (EVD) in humans is caused by four of five viruses belonging to the genus *Ebolavirus*. Although most new EVD infections in humans arise from direct contact with the blood or other body fluids of infected people, scientists suspect that transmission from animals to humans may occur through consumption of or contact with infected bats and monkeys living in nearby rainforests. Ebola virus is known to infect animals such as apes, monkeys, and bats in addition to humans, and is considered a zoonotic pathogen. Once a person is infected, they typically suffer from high fever, vomiting, diarrhea, and sometimes muscle pain, headaches, and bleeding, which often lead to death.

Since EVD was first identified during a 1976 outbreak in Zaire (now the Democratic Republic of the Congo, DRC), deadly outbreaks have repeatedly occurred in certain regions of Africa. Person-to-person transmission of the virus is rapid. This, combined with the frequency of ground travel, remoteness of outbreaks leading to slow detection and response, and healthcare and funeral practices that lead to transmission, can make containing an

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outbreak extremely challenging. For example, during a 2014-2016 outbreak, which began in West Africa and is currently the largest Ebola outbreak in history, individuals living in Europe and the United States also became infected. Ultimately, the outbreak infected 28,652 people in at least 10 countries, killing 11,325 people.

These outbreaks are devastating to the communities in which they occur, including the DRC, which has suffered the most outbreaks since 1976. While containment has been the primary method of controlling EVD outbreaks, the scale and duration of the 2014-2016 outbreak caused scientists to ramp up their efforts to develop vaccines, leading to the development of at least one potential candidate vaccine in 2017.

While communities await an effective vaccine, epidemiologists continue to pursue other strategies for the prevention or control of future EVD outbreaks. In this study, researchers analyzed patterns of disease spread, such as the frequency of EVD infection in people of different ages or sex. In the above figure, scientists compiled data on 996 suspected, probable, or confirmed cases of EVD in the DRC between 1975 and 2014. The cases span all seven outbreaks that occurred in the country during that time period.