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Section for Disease Prevention
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Situation/Background/Assessment/Recommendation (SBAR)
Missouri's Public Health Response to Zika Virus

1. SITUATION: The Missouri Department of Health and Senior Services (DHSS) is currently developing the Missouri Zika Action Plan (MOZAP) in accordance with guidance proposed by the Centers for Disease Control and Prevention (CDC) at the following website: http://www.cdc.gov/zika/public-health-partners/risk-based-prep.html. The CDC document provides guidance for a comprehensive, risk-based, jurisdictional, phased response based on escalating risk for the introduction of Zika virus. Five categories of risk are proposed: (a) Preparation - Vector present or possible in the state, (b) Risk Category 1, Mosquito Season - *Aedes aegypti* or *Ae. albopictus* mosquito seasonal biting activity, (c) Risk Category 2, Confirmed Local Transmission by Mosquitoes – Single case or cases clustered in a single household/community in a county or jurisdiction, (d) Risk Category 3, Widespread Local Transmission by Mosquitoes – Multiple locations within a county or jurisdiction, and (e) Risk Category 4, Local Transmission by Mosquitoes in Multiple Counties – Transmission regionally or statewide. For each risk category, detailed activities must be included in the MOZAP for targeted areas of response actions, including communication, surveillance, laboratory testing, vector control, pregnant women outreach, and blood safety. Input and collaboration are needed by local public health agencies and other partners in the initial development and periodic updates of the MOZAP.

2. BACKGROUND: Zika virus is primarily transmitted person-to-person by mosquitoes. It can also be transmitted by sexual means, through maternal-fetal transmission, potentially through infectious blood/tissues/organs, and possibly by other means. It is currently believed that only around 20% of persons infected with this virus develop illness, which is normally mild and characterized by fever, rash, joint pain, and conjunctivitis. Mortality is typically very low. Zika virus was initially isolated from macaque monkeys and mosquitoes in the Zika Forest of Uganda in 1947. The first human case was identified in Nigeria in 1954. Prior to 2007, there had been only 14 documented cases of human Zika virus disease worldwide. In 2007, an outbreak of Zika disease occurred on Yap Island in the Micronesian Island chain, infecting 75% of the island's 7,000 inhabitants (18% of infected persons developed mild symptoms). In 2013 and 2014, an outbreak of Zika virus disease occurred in French Polynesia causing a mild, self-limiting illness of 2 to 7 days duration in 28,000 of the island's 280,000 population (140,000 persons were thought to have been infected). In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infections in Brazil. This was the first documented occurrence of Zika virus in the tropical Americas. By late 2015, Brazilian health authorities had noted a dramatic increase in the number of cases of microcephaly in fetuses/newborns that were temporally and geographically associated with cases of Zika virus infection in pregnant women. In addition, an increase in cases of Guillain-Barre Syndrome (GBS) among

residents of Brazil was detected and again was linked to Zika virus infections among those persons. As of April 18, 2016, 35 countries/territories in the Americas have documented active Zika virus transmission. As of April 14, 2016: (a) Microcephaly and other fetal malformations potentially associated with Zika virus infection have been reported from six countries around the world, and (b) 13 countries and territories worldwide have reported an increased incidence of GBS associated with Zika virus infection. Based on a growing body of research, there is scientific consensus that Zika virus is a cause of microcephaly and GBS. Local transmission has not yet been detected in the continental U.S. As of April 20, 2016, 388 persons in the U.S. with Zika virus infection have been reported to CDC. These cases are primarily travelers returning from regions with active Zika transmission; 8 cases of apparent sexual transmission are also included in this total. Included in the 388 cases are 33 pregnant women; 1 case of GBS associated with Zika virus infection has been observed in a traveler returning to the U.S.; there have been no reported cases of microcephaly associated with returning travelers.

3. ASSESSMENT: With the current outbreak of Zika virus infection in the Americas, cases among U.S. travelers will likely increase. Imported cases may result in virus introduction and local mosquito-borne transmission in some areas of U.S., particularly as mosquito populations increase during the spring and summer months. States with the highest risk of local mosquito-borne transmission are Florida, Texas, and others along the Gulf Coast. However, at least one of the two vectors of Zika virus, *Ae. albopictus*, is known to be widely distributed across Missouri. The other vector, *Ae. aegypti*, may also have a geographically and/or seasonally limited distribution within the state. The MOZAP must be developed as expeditiously as possible to address the potential introduction of this virus into the state in order to develop effective intervention and prevention strategies.

4. RECOMMENDATION: Utilize existing public health partnerships (DAC, MoALPHA) for review and presentation of the completed MOZAP via regional town hall type gatherings. Regional attendees will include public health partners and their associated local governmental leaders.