How it Began

- The first case of Ebola occurred in 1976 in Zaire, now the Democratic Republic of the Congo, near the Ebola River. Since then, there have been about 20 outbreaks of Ebola hemorrhagic fever across Central Africa.
- Ebola virus, like most emerging pathogens, originated in wildlife and only occurs in humans after “spillover events”:
  - Spillover events may be increasing in many places in the world because of increased human-animal contact, land development and environmental change.
- It is typically difficult for pathogens to adapt to new host species, how this happens is an active area of research.

Animals and Ebola

- A natural animal reservoir for Ebola virus has not been formally identified despite testing of tens of thousands of samples from plants, insects and other animals in Africa over many decades. However, samples from fruit bats and “flying foxes” suggest they may have been the carrier.
- Rodents such as mice and rats are not generally considered carriers of Ebola. This is supported by many scientific studies. For example, Ebola virus isolated from human cases does not cause disease in mice. Likewise, “mouse-adapted” Ebola virus does not appear to cause disease in non-human primates.
- The only domestic animals that have been found to be susceptible to Ebola viruses are dogs and pigs. Dogs showed little to no discernible symptoms of the virus, while pigs showed mild to severe symptoms.
- Both humans and non-human primates, such as macaques and gorillas, display mild to severe signs of disease if infected with Ebola virus. Humans may become infected via bite by a non-human primate or by possibly consuming “bushmeat” obtained from non-human primates.

How it is Transmitted

- Ebola is transmitted in two ways. One is zoonotic transmission, meaning that an infected animal transmits the virus to a human. The second is when an ill human transmits to other humans. Human-to-human spread occurs through direct exposure to blood or secretions of an ill patient, or by contact with contaminated equipment.
- Ebola is often spread in households among family and friends, in health care settings, and during burial ceremonies. Symptoms may appear 2-21 days after exposure to an infectious patient.
How ARMC is Prepared

• Isolation equipment is readily available throughout the hospital and employees are familiar with the use of the equipment.
• Hospital staff is educated on appropriate evaluation, isolation and treatment of patients with possible Ebola exposure.

A Policy Perspective

• In the event of an outbreak, any country has the right to enact polices to protect its citizens and to prevent the spread of an outbreak to other countries:
  o Quarantine of exposed people
  o Isolation of sick people
  o Screening of people entering or exiting the country for sickness or disease exposure
• CDC has posted Warning-Level 3 Travel Notices for Guinea, Liberia and Sierra Leone:
  o Recommending that people avoid non-essential travel
  o Also recommending that education-related travel to these countries be postponed until further notice
• CDC is not recommending colleges and universities isolate or quarantine students, faculty or staff based on travel history alone.
• CDC recommendations and requirements for Ebola isolation are similar to other common infectious diseases seen regularly in the Emergency Department and throughout the hospital at ARMC.