

United States Naval Medical Research Unit TWO's Hub and Spoke model: a paradigm for addressing contemporary military biothreats

Summary: U.S Naval Medical Research Unit TWO was established in Guam during World War II and is currently located in Southeast Asia with its headquarters in Singapore. NAMRU-2's primary mission is to improve U.S. and partner military force health protection through infectious disease research including surveillance and countermeasure development. Applied research and field testing of militarily relevant products is a key aspect of NAMRU-2's medical research mission, along with monitoring infectious disease threats and novel pathogen discovery. The research priorities are accomplished through mutually beneficial engagement activities with regional military, academic and industry partners, and strengthened and maintained through a continuum of studies. NAMRU-2 has evolved over 75 years of history and now implements a "hub and spoke" concept of operations.

Methods-Results: Advantages and disadvantages of the Hub and Spoke Model of operations for NAMRU-2 are presented in Table-1. The primary advantages of NAMRU-2's current model of operations is enabling broadened operations in the region while reducing mission risk. This model allows the scientific portfolio to shift, as needed, to align with host nation and sponsor priorities while simultaneously maintaining health security objectives. Singapore currently forms the central hub of NAMRU-2's operations that can extend and realign spokes (partners/projects) in various locations as necessary. This model recognizes that one large monolithic laboratory would leave the unit vulnerable and unable to respond to shifting infectious disease threats in the region. The true advantage of this model is that the spokes, regional collaborative projects, remain flexible in order to accommodate changing partners, sponsors, and research and engagement priorities.

Conclusions: The Hub and Spoke model allows NAMRU-2 to engage SE Asian partners rapidly to preserve force health protection of US and partner militaries.

Key Words: Infectious Diseases, Southeast Asia, NAMRU, Surveillance