

ORIGAMI AND THE FINE ART OF TRACKING RABIES

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Despite ample opportunities for viral detection from the time of Negri, rabies has remained an elusive foe from the standpoint of enhanced laboratory-based surveillance. Complex ideas and intricate, high tech multilayer solutions may, at times, provide resolutions to public health problems, but more often it is a simple, practical, penny-wise and user friendly application, allowing for widespread implementation, which produces sustainable health improving impacts. As repeatedly demonstrated over past centuries careful observation, open-minded, transdisciplinary approaches combined with simplicity are keys to lasting solutions to public health challenges. Examples include implementation of quarantine, Semmelweis' hand washing for prevention of puerperal fever, Lister's sterilization of surgical instruments, Snow's removal of the Broad Street pump handle to herd immunity via vaccination, antibiotic discovery and fine-mesh cloth filters for clean drinking water. Clearly, rabies disproportionately affects already neglected communities with low socioeconomic status in developing countries, with scarce resources, inadequate access to healthcare and less than ideal laboratory support. Today, simple but sensitive and specific economical diagnostics and targeted mass immunization is needed for the elimination of human rabies of canine origin. Emphasis on early detection and empowerment of local animal control teams and community healthcare workers to rapidly test diagnostic samples and make decisions in a decentralized fashion are critical for effective, sustainable rabies prevention programs and its ultimate elimination. From laboratories-on-paper medical diagnostics to origami-based paper foldscopes, innovative and often unorthodox ideas and approaches for current and future rabies diagnostics may be necessary to track rabies at a local, national and regional level.