Over the past decade, the Zaïre strain of Ebola virus (ZEBOV) has repeatedly emerged in Gabon and Republic of Congo (Congo), affecting both human and wildlife populations. Evidence to date suggests a dramatic impact on endangered gorilla and chimpanzee populations in this region, with mortality rates believed to reach 90% or more. Wildlife Conservation Society (WCS) has been conducting ecological studies of Ebola virus and its effect on wildlife populations, with the aim of developing mitigation strategies. A major constraint to that work is the identification of wildlife mortality events in such a huge forested region. ZEBOV infections in this region have also claimed human victims, most recently confirmed in 2005. The source of human infections in this region involves direct contact with – and sometimes consumption of – infected wildlife carcasses (usually primates), providing a firm link between human and wildlife health. Since 2005 WCS has been conducting wildlife disease surveillance in the northern Congo region, involving directed reconnaissance walk surveys and a hunter-based surveillance program. We will present the design and implementation of the hunter-based surveillance for the purpose of locating wildlife epidemics, including an assessment of the role this system can play both in human health early warning systems and in wildlife disease investigations.