



# TANZANIA

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### BIOGRAPHY

*Dr Emmanuel Abraham Mpolya is a lecturer in biostatistics and epidemiology at the Nelson Mandela African Institution of Science and Technology (NM-AIST) in Arusha, Tanzania. Since February 2015 he has been assisting the WHO Country office – Tanzania and the ministries involved in the rabies elimination project with data management, data analysis and training of ministry personnel in the same.*

### SUMMARY

The rabies elimination demonstration project in Tanzania was launched in 2010 and implemented in 28 districts of the southeastern mainland Tanzania as well as in Pemba Island. More than 100 veterinary and health units comprising 150 workers from the veterinary and health sectors were involved. The project covered a total of about 8 million people. Project activities included: prevention efforts such as mass dog vaccinations and post-exposure prophylaxis (PEP) administrations; reporting of animal and human cases and bite exposures; sample collection and laboratory confirmation of cases whenever possible; documentation; and dissemination of information across sectors and stakeholders. The mass dog vaccination campaign improved as the project continued. When the project started in 2010 only about 1,250 dogs were vaccinated. The number of dogs vaccinated increased 17 times in 2011 when about 22,283 dogs were vaccinated. The number increased further in subsequent years, reaching about 45,000 in 2014. Vaccination coverage across districts ranged between 34% and 80% with only two districts attaining <50%.

Throughout the project duration there were marked improvements in the collection, detection and documentation of suspect rabies cases and samples. The overall number of samples analysed increased with time while the number of positive samples decreased with time. The demand for PEP was lowest when the project started and increased as a result of increased awareness about rabies. In 2011 about 3,800 PEP doses were consumed but in 2012 this number rose to 8,000 doses and fell monotonously in subsequent years. The mode of administration of PEP also changed over time. When the project started more PEP administration was done intramuscularly. The trend changed in subsequent campaign years when almost all districts adopted administration of PEP through the intradermal route. The economic analysis showed that the cost per dog vaccinated ranged from USD 2.50 to USD 22.49 across districts and phases, with the phase average ranging from USD 7.30 to USD 11.27. These figures were influenced by over purchase of vaccine in the early phases of the program and the significant costs associated with purchasing equipment for a program starting from scratch. The cost per PEP course administered was approximately USD 24.41 with the average patient receiving 2.5 of the recommended four doses per suspect bite. Despite several challenges, a clear fall in the demand for PEP, number of rabies cases and number of positive samples for rabies resulted from mass dog vaccination campaigns.