

RABIES AND ITS' TOOLBOX
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Recently, regional progress in dog-mediated rabies have been achieved in several developing countries. These great accomplishments seem to underscore the claim that we know how to end rabies: rabies is 100% preventable with the available existing tools and proven approaches. Unfortunately, in other areas these same tools and approaches have not been able to break the cycle of transmission. How come it seems to work in one area and not in another: Are these failures a result of the fact that not all the tools are readily available or that the available tools are not properly used? But may be they are not suitable for local settings in certain countries? In the latter case can we adapt or optimize these tools and/or their 'instructions for use' like we did for intradermal administration of human vaccines? The most cost-effective approach to control dog-mediated rabies is by mass vaccination of dogs: Vaccinating more than 70% of the dog population can break the transmission cycle. But it seems that aiming for 70% dog vaccination coverage for an entire population may not be (initially) feasible everywhere. One of the major hurdles achieving such a high vaccination coverage is the large proportion of free-roaming dogs in some countries that are not accessible for parenteral vaccination, or only after intensified attempts to capture and vaccinate these animals. Is there not a more sustainable and (cost-) effective way to reach these dogs? It seems there is, considering that we have been able to vaccinate wildlife species against rabies and consequently have been able to eliminate certain types of wildlife-mediated rabies from large areas of North-America and Europe. Simply by adapting the available tool 'parenteral vaccine in a syringe' to an 'oral vaccine in a bait' . Oral vaccination of wildlife can be adapted for free-roaming dogs as has been shown in several field studies. If properly used, as with any tool, it can increase overall vaccination coverage, especially of the free-roaming dogs. In areas where the existing tools and approaches have failed or not yet reached the goals set, oral vaccination should be considered as an additional approach and become part of rabies' tool box. Of course, as with all other tools in the box, not only for vaccination but also for diagnostics, there will always be room for improvement like for example enhanced thermo-stable dog vaccines. But because rabies kills someone every 9 minutes we can't wait and we should start to End Rabies Now with all the tools available.