

Playing catch-up with Lifeline Vaccines

“No cattle – no Maasai – no East Coast fever vaccine – no cattle.” – This was the stark message shared with GALVmed when the Edinburgh-based NGO met with over twenty-five Maasai pastoralists and smallholder dairy farmers in Arusha, Northern Tanzania in Spring 2009.

East Coast Fever (ECF) puts the lives of more than 25 million cattle at risk in the 11 countries within the East African region where the disease is now endemic. The good news is that a highly effective vaccine has been developed and GALVmed (Global Alliance for Livestock Veterinary Medicines) is working with partners in developing countries and the International Livestock Research Institute (ILRI), who have produced over a million doses of the vaccine, to make it accessible and affordable to those who need it most.

■ Giving more priority to livestock vaccines

Nearly 700 million of the world’s poorest people rely on livestock for their survival and vaccines can play a crucial role in keeping lifeline animals alive and in good health. For some diseases, effective vaccines already exist and so GALVmed and its partners are scaling up production and addressing the weak links in distribution channels. A vaccine that is not in an animal is of no use. Bottlenecks along the distribution line are mostly downstream, and so GALVmed is acting as a catalyst to

development, distribution and adoption, through unique partnerships, mainly at grassroots level. For others, however, new vaccines or improvements on existing vaccines are needed. Within the African context, conditions for storage are desperately needed. As with human health products, ensuring safety and efficacy is of paramount importance and is rightly enshrined in international law and a regulatory requirement of individual countries.

The production of vaccines is a lengthy process, and disease-causing agents do not respect time, geographical boundaries, budgets, politics or scientific processes. Whilst outbreaks such as so-called *swine flu* (H1N1)

make headlines in the affluent world, many devastating diseases endemic in developing countries are neglected. Why, when around 700 million people world-wide of whom the majority are in sub-Saharan Africa depend on livestock for food, education and the dignity of self-determination, are vaccines not made more of a priority? The scale of the challenge in producing and distributing vaccines and the perception that there is not a sufficient market in developing countries may offer part of the answer. There is a miscon-

Ngayok Legilisho from Longido District, Tanzania (centre) is happy to vaccinate his animals against East Coast Fever. Selling healthy cows means he is able to feed his family.



Photo: GALVmed

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ception that not making a vaccine free hinders its uptake, whereas the reality is that the dumping of free vaccines can compromise the sustainability of supply as local markets are undercut and destroyed.

Legal and safety aspects

Central to GALVmed's approach is the registration of vaccines with the regulatory authorities of each country. Registration ensures national oversight and legal status for use and conformity to international standards and also permits commercialisation of the products, supporting value chains. It thus seeks to embed and safeguard the sustainability of essential products. Fake and substandard drugs are a massive problem in many developing countries with the skilled perfection of the packaging production contrasting with the base wickedness of condemning the lifeline livestock of poor people to death with sugar/flour-pills. It is estimated that approximately 68 percent of livestock drugs in West Africa fall into this category. With so much riding on efficacy, it is essential that livestock keepers can have confidence in products and people. Trust in knowing suppliers and delivery agents is of paramount importance to many livestock keepers.

The logistics of a cold-chain (refrigeration) for some vaccines, medicines

About GALVmed

GALVmed is a not-for-profit global alliance and a public private partnership, based in Edinburgh, Scotland. It is committed to:

- Raising awareness about the links between livestock health, economic development and human health.
- Ensuring that resources are used to efficiently distribute quality livestock diagnostics, vaccines and medicines to rural livestock keepers.
- Advancing innovation in this field and plans to develop, register and launch four to six vaccines, pharmaceutical or diagnostic products by 2015 (minimum targets).

GALVmed is focused on 13 key diseases that are most relevant to poverty reduction in target areas: Newcastle Disease, Avian Influenza, African Swine Fever, Porcine Cysticercosis, Classical Swine Fever, Peste des Petits Ruminants (PPR), Sheep & Goat Pox, Rift Valley Fever, Contagious Caprine Pleuropneumonia, Hemorrhagic Septicaemia, Contagious Bovine Pleuropneumonia, East Coast fever, Trypanosomosis.

For more information:

GALVmed: www.galvmed.org

Case studies: www.galvmed.org/path-to-progress

and diagnostics can add significantly to the challenge of fiscally poor livestock keepers accessing the help their animals need. High temperatures and long journey times between supplier and end-user can render medicines useless and veterinary expertise is often essential for safe and efficacious delivery into the animal. The immunisation procedure for most vaccinations involves some form of storage requiring refrigeration, ranging from extremely cold temperatures such as liquid nitrogen (-175 °C) to storage on ice.

The remoteness from population concentrations of some pastoralist communities can present difficulties in accessing veterinary care as government vets can be very thinly spread and private practitioners reluctant to spend much time travelling for what is sometimes small financial reward. In some areas, farmers' co-operatives are coordinating animals for vaccination and some pastoralist communities do this by SMS and mobile phone. Para-vets and community animal health workers

are employed successfully to undertake vaccinations under the supervision of veterinarians in some areas, but not all countries accept this arrangement.

When the logistical challenges can be overcome, the benefits of vaccines can be life-changing for livestock-keepers, as Ngayok Legilisho, a young Elder from Ngoswak village, Longido District, Tanzania, relates: *"The East Coast fever vaccine has increased our standard of living. Before, it was a struggle to feed the family. With the vaccine, we can sell one or two healthy cows and be able to educate our children and enjoy other activities. We are also able to build permanent homes."*

Livestock vaccines are so essential and disease-causing agents so ingenious that vaccine production must become much more proactive and not simply a reaction to outbreaks in a deadly game of catch-up. Vaccines should be brought closer to people in Africa enabling local ownership, cutting costs and seeking to ensure sustainability. Getting livestock vaccines to the people who need them most warrants very serious consideration and priority effort as small interventions make such a huge difference to the lives of millions of people.



Photo: GALVmed

Proper storage is essential to maintain the effectiveness of vaccines and other veterinary medications. – Safari Mbui in his veterinary drug store in Mwingi, Kenya.