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STIMULUS PACKAGE FOR ELIMINATING DOG-MEDIATED HUMAN RABIES

A CONCEPT



World Health
Organization

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**“DOG-MEDIATED HUMAN
RABIES ELIMINATION IS
FEASIBLE.
THE TIME TO ACT IS
NOW”**

Overview

ELIMINATION IS FEASIBLE

Rabies causes tens of thousands of human deaths every year. More than 99% of human rabies cases are caused by dog bites. These cases are preventable through dog vaccination to control the disease at its source, and through the provision of rabies vaccines and immunoglobulins to humans following suspect bites. It has been demonstrated that elimination of dog-mediated human rabies is possible by “starting small”, engaging local champions and using successful pilot projects as momentum for expansion. Regional rabies vaccine banks have supported this effort through efficient procurement systems that increase access to quality-assured vaccines.

THE CONCEPT: RABIES STIMULUS PACKAGES

This document outlines the concept of a stimulus package for rabies elimination. The aim of a stimulus package is to catalyse rabies control by starting community projects, building local capacity and using success to generate momentum for growth. Governments could apply for a package, which would provide technical and material support to run small, successful rabies control projects. These in turn build evidence for the feasibility of larger scale elimination, generate enthusiasm for

Zero human deaths from canine-mediated rabies by 2030



action and promote investment for sustainability and up scaling. Data reporting in return for the packages would allow the documentation of successes and lessons learnt to benefit global elimination efforts more broadly.

WHAT IS INVOLVED?

Stimulus packages aim to provide a toolkit to kick-start sustainable dog-mediated rabies elimination programmes. They are intended for application in pilot or demonstration areas, and can be adapted according to specific area needs. Package components could include:

- **Procurement of materials:**
 - Dog rabies vaccines and consumables
 - Human rabies vaccine, immunoglobulins and consumables
 - Animal handling equipment
 - Diagnostic tools and reagents
 - Communication and awareness materials
- **Capacity building:**
 - Animal health worker training in animal handling and mass dog vaccination
 - Animal health professional training in rabies diagnosis
 - Medical staff training in pre- and post-exposure prophylaxis
 - Community education
- **Technical support:**
 - Strategic planning and development
 - Guidance on implementation of mass dog vaccination campaigns
 - Rabies surveillance

What is involved?

PROCUREMENT OF MATERIALS

1. Dog rabies vaccines and consumables

Dog-mediated human rabies elimination is feasible through vaccinating 70% of the dog population in high-risk corridors and source areas. Proposed materials include:

- Quality-assured dog rabies vaccines supplied through a vaccine bank
- Consumables such as syringes, needles, disinfectant and gloves
- Material to ensure cold chain (e.g. cold boxes)

2. Animal handling equipment

Safe catching and handling of dogs is imperative to the safety and welfare of both the handlers and the dogs. Proposed materials include:

- Safe catching equipment, e.g. nets and control poles
- Dog identification materials

3. Diagnostic tools for rabies diagnosis

Accurate diagnosis of rabies is necessary for enhanced surveillance. Clinical observations may lead to a suspicion of rabies. However, the only way to undertake a reliable diagnosis is to identify the virus using laboratory tests. The package could support this through:

- Provision of diagnostic tools and reagents

4. Human rabies vaccines, immunoglobulins and consumables

To prevent infection, persons potentially exposed to rabies require immediate access to appropriate wound care and post-exposure prophylaxis (PEP). Staff involved in dog vaccination campaigns are at high risk of rabies exposure and should be immunized before implementation of vaccination campaigns. Proposed materials include:

- Human rabies vaccines (pre-PEP and PEP)
- Human rabies immunoglobulins
- Consumables such as syringes, needles, disinfectant and gloves

5. Communication and awareness materials

Rabies awareness is essential to educate the public in bite prevention and timely treatment of wounds. Regular dog vaccination is critical to rabies control. Raising awareness of mass dog vaccination campaigns informs communities and encourages participation. To support education and increasing rabies awareness, the package could provide:

- Adaptable awareness materials for dog vaccination and responsible dog ownership
- Adaptable awareness materials for bite prevention and human PEP

“THIS PACKAGE WOULD PROVIDE TECHNICAL AND MATERIAL SUPPORT TO KICK START DOG-MEDIATED RABIES ELIMINATION PROGRAMMES”

CAPACITY BUILDING

1. Animal handling and vaccination

Training of personnel to safely catch and vaccinate dogs, such as:

- Training courses on safe animal handling and vaccination techniques
- Experts to conduct technical workshops

2. Rabies diagnosis

Training of laboratory staff in sample collection and the appropriate use of rabies diagnostic tests, such as:

- Training laboratory and field staff on sample collection and transport
- Training laboratory staff on the use of diagnostic tests

3. Human pre- and post-exposure prophylaxis

Immediate, appropriate wound management is essential to prevent rabies infections in humans following suspect exposures. Pre- and post-exposure rabies vaccinations are most cost-effective when administered intradermally. Proposed materials include:

- Guidelines for wound management, PEP use and categorization of suspect contacts
- Treatment posters, booklets and general media for health professionals
- Training of medical staff on intradermal immunization techniques

4. Community education

Community engagement allows for self-sustaining solutions. Supporting these communities with educational tools and opportunities to engage is a building block for success. Community education to raise awareness of the importance of rabies prevention, include:

- Training courses on community education and awareness
- Facilitation of stakeholder and technical workshops

Dog vaccination: the most effective tool to combat rabies



TECHNICAL SUPPORT

1. Strategic planning and development

Providing assistance to governments and groups with strategic and operational planning will ensure the success and sustainability of the rabies elimination initiative. This includes:

- Support for strategic and operational planning
- Implementation of the Stepwise Approach towards Rabies Elimination tool

2. Technical support for mass dog vaccination campaigns

Strategic, well-planned mass dog vaccination campaigns are an effective way to break the cycle of rabies transmission from dogs to humans. Human rabies is preventable by vaccinating 70% of the canine population in high-risk corridors and source areas. Proposed support includes:

- Expert guidance on the development and implementation of strategic dog vaccination campaigns
- Assistance in coordinating relevant stakeholders

3. Rabies surveillance support

Surveillance systems allow identification of high-risk areas for rabies transmission and can assist in resource allocation for targeted interventions. Proposed support includes:

- Expert support for rabies surveillance design, implementation and evaluation of surveillance data

HOW IT WOULD WORK

We envision that stimulus packages would be tailored to the country context based on specific needs and data provided. Investors could fund single or multiple components of the package and interested parties could request access by e-mailing a designated contact person and providing:

1. A strategic plan forecasting country needs and outlining how, where and by whom the package will be implemented
2. Baseline figures on the incidence of rabies in humans and dogs, and control measures currently in place

MONITORING & EVALUATION

Implementers of the stimulus package will be required to report on a 6-month basis providing:

1. Reporting of numbers, locations and implementation strategies of each provided material at 6-month intervals
2. Feedback on knowledge uptake, such as number of dog vaccinations, number of campaigns conducted, number of awareness events and number of persons seeking care
3. Comparison of actual needs with forecasted needs

Key resources

Rationale for investing in the global elimination of dog-mediated human rabies. Geneva. World Health Organization; 2015

http://apps.who.int/iris/bitstream/handle/10665/185195/1/19789241509558_eng.pdf

Rabies factsheet. Geneva. World Health Organization; 2015

<http://www.who.int/mediacentre/factsheets/fs099/en/>

Rabies technical disease card. Paris. World Organisation for Animal Health (OIE); 2016

http://www.oie.int/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/Disease_cards/RABIES_FINAL.pdf

Canine rabies blueprint. Manhattan, KS (USA). Global Alliance for Rabies Control; 2014

<http://caninerabiesblueprint.org/>

Framework for elimination of dog-mediated human rabies

http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/Rabies_portal/EN_Timeisnow-GlobalFramework.pdf

Stepwise approach to rabies elimination (SARE) tool

<http://caninerabiesblueprint.org/A-stepwise-approach-to-planning>

WHO rabies

<http://www.who.int/rabies/en/>

OIE rabies portal

<http://www.oie.int/animal-health-in-the-world/rabies-portal/>

GARC

<https://rabiesalliance.org/>

FAO

<http://www.fao.org/home/en/>

