



# Rabies

An introduction for  
decision makers



## A deadly disease, but 100% preventable

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**Rabies** is the deadliest of all zoonotic pathogens. >99% die after symptom onset.

It kills one person every 9 minutes – around 59, 000 per year. (3.7 million DALYs)

Almost half of rabies deaths are children under 15.

Domestic dogs are the main reservoir of the disease and >95% of human cases are transmitted by dogs.

Major cause of death is lack of access to human rabies vaccines and lack of knowledge about rabies treatment and prevention.

**Death is 100% preventable** if patients have prompt access to effective vaccines.



# Rabies is a disease we know how to beat

- ⌘ Effective vaccines to prevent and treat rabies in humans and animals have existed for over 100 years.
- ⌘ One of the world's first vaccines was for rabies. It was administered by Louis Pasteur in 1885 to a boy who had been bitten by a rabid dog. The boy survived.
- ⌘ There is broad global agreement on the policies and approaches needed to control rabies, as set out in **Zero by 30: the Global Strategic Plan to end human deaths from dog-mediated rabies by 2030**.
- ⌘ Achieving the Zero by 30 goal will require increased political commitment, resources and coordination across human and animal health sectors and ministries, as well as with local authorities, regions, and across borders.



# Rabies puts the greatest burden on the poorest people

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- ⌘ Rabies is classified by WHO as a Neglected Tropical Disease.
- ⌘ It remains a serious public health risk affecting some 3 billion people in 150 countries. The risk is highest for the poorest communities.
- ⌘ The estimated cost of rabies globally each year is USD 8.6 billion in lost lives, livelihoods and high costs of treatment. Productivity loss from premature deaths from rabies estimated at USD 4.7 billion per year.
- ⌘ Hundreds of thousands of people are exposed to suspected rabid dogs each year but are unable or unaware of how to access quality human rabies vaccines.
- ⌘ Lack of access to PEP and high cost of rabies treatment is a source of serious health inequality.



# Dog vaccination is essential in rabies control

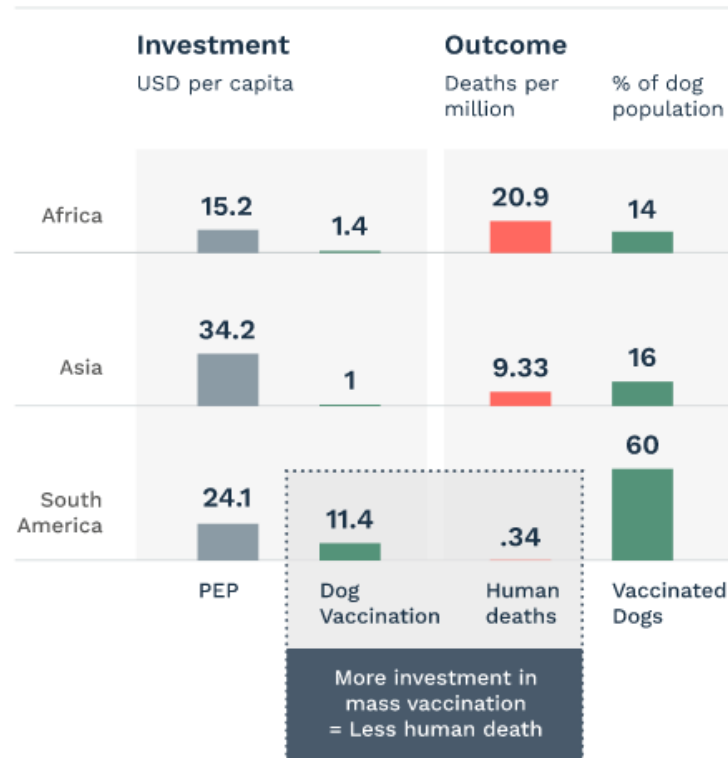
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- ⌘ Dogs are the main reservoir of rabies and dog vaccination is essential in all rabies control strategies.
- ⌘ Countries that have eliminated human rabies deaths have done so by controlling rabies in dogs, and ensuring human vaccine is widely available to anyone with a suspected rabies exposure.
- ⌘ Dog vaccines are significantly cheaper than human post-exposure prophylaxis. Cost of dog vaccination averages US\$4 per dog, while the cost of PEP to patients can often reach one month's salary or more.



# Dog vaccination reduces PEP costs

Current spending on rabies underinvests in dog vaccination

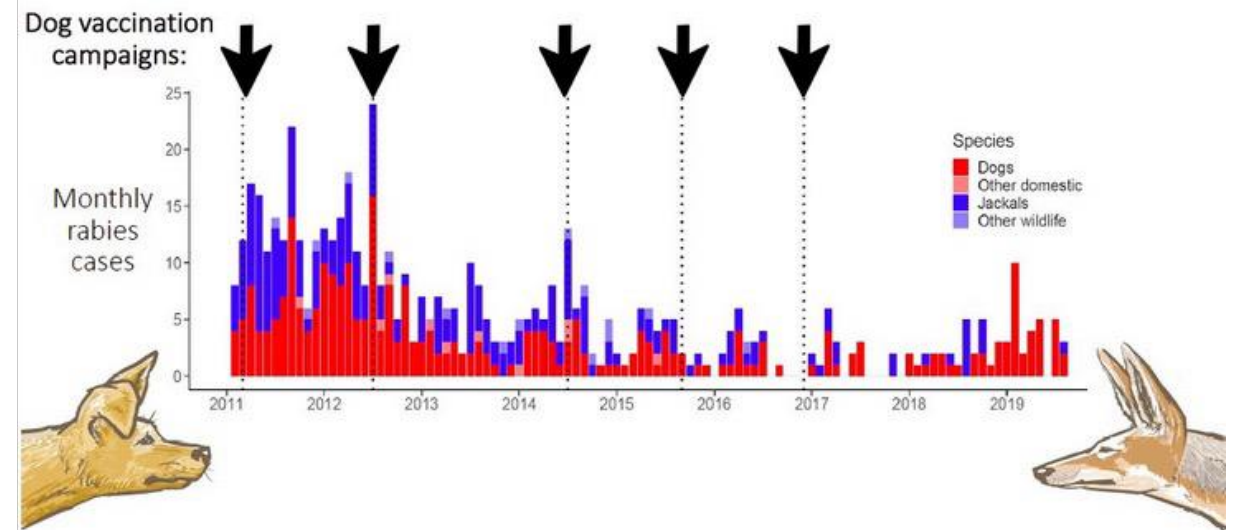


- ⚡ Unless rabies is controlled in dogs through vaccination, the source of rabies in humans never reduces, and costly demand for PEP will escalate.
- ⚡ Where dog vaccination rates are high (e.g. Latin America), numbers of human deaths reduce sharply, and PEP costs are also reduced.

Source: [WHO NTD report – One Health: Approach for action against neglected tropical diseases 2021-2030](#)

# Rabies, dogs and wildlife

- ❖ Rabies is also found in wildlife, but domestic dogs are the main reservoir of the disease.
- ❖ Controlling canine rabies is essential to controlling rabies in wildlife.
- ❖ Canine rabies control protects biodiversity and endangered species.



- ❖ Figure: Decline in rabies cases in dogs, jackals and other wildlife following dog vaccination campaigns in SE Tanzania (dotted lines). Source <https://doi.org/10.1111/1365-2664.13983>



# Rabies control and the Global Goals

Effective rabies control supports achievement of:

- ❖ **SDG 1** (No poverty) by improving livelihoods and ensuring affordable treatment for all.
- ❖ **SDG 2** (Zero Hunger) by enhancing food security in pastoral regions by protecting livestock from rabies.
- ❖ **SDG 3** (Good Health and Well Being) through elimination of a preventable NTD, reduction in severe injury and trauma from dog bites.
- ❖ **SDG 10** (Reduced inequalities) by ensuring accessibility to life-saving vaccines for all.
- ❖ **SDG 11** (Sustainable Cities and Communities) through integrated dog population management programs, including rabies control.
- ❖ **SDG 15** (Life on Land) by protecting biodiversity and wildlife ecosystems from rabies.
- ❖ **SDG 17** (Partnership for the goals) by bringing sectors together to collectively tackle rabies.



**LEAVE NO ONE  
BEHIND**





## Rabies – examples of collaboration to date

- ❖ **Zero by 30**, launched in 2015 by the Tripartite (FAO, WHO, WOAHA) and the Global Alliance for Rabies Control (GARC).
- ❖ **United Against Rabies (UAR) Forum** – an inclusive network launched by the Tripartite in 2020, bringing together multisector partners and stakeholders to implement the Zero by 30 objectives.
- ❖ **Regional bodies** such as AU-IBAR, ASEAN, MENA-OECD have started processes to coordinate rabies elimination.
- ❖ **World Rabies Day** (Sep 28) is coordinated by GARC. Many countries use WRD to carry out mass dog vaccination campaigns and public education.
- ❖ **WOAHA Rabies Vaccine Bank** established in 2012 facilitates the procurement of high-quality dog vaccines for countries.
- ❖ **GAVI's** commitment to include human post-exposure prophylaxis for eligible countries (VIS 2018, not yet implemented).

# Rabies and the COVID-19 pandemic

- ⌘ During the pandemic, many rabies control activities, such as mass dog vaccination, were suspended.
- ⌘ An increase in rabies cases and human deaths is now being reported in many countries.
- ⌘ Covid-19 also raised awareness about zoonotic disease.
- ⌘ Effective rabies control is a potential pathfinder for improved zoonotic disease management and future pandemic prevention.

A decorative graphic of seven red dots arranged in a curved, arrow-like shape pointing to the right.

# Rabies is on the rise

Add latest rabies data in your country/region here



# Rabies – the Case for Investment

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- ❖ Rabies costs around **USD 8.6** billion every year in lost lives and high costs of treatment.
- ❖ Rabies control through mass dog vaccination is **significantly cheaper** than treating humans for rabies.
- ❖ The average cost of a full course of human rabies treatment is \$US108, while dog vaccination averages \$US4.
- ❖ If dogs are vaccinated effectively, evidence shows that human deaths fall dramatically towards zero and the need for expensive PEP reduces sharply.

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## What we can do together

Set out your policy requests to decision makers in your country/region in the following slides.



# Develop a National Rabies Elimination Strategy

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We propose working with decision makers and policy experts to:

- ✿ Develop a National Rabies Elimination Strategy with the goal of ending all human deaths from dog-mediated rabies.
- ✿ Follow the Rabies Roadmap (see [United Against Rabies website](#))
- ✿ Encourage a One Health approach to rabies control to strengthen health resilience and be better prepared to detect and prevent future endemic and zoonotic diseases, including pandemics.



# Apply for Gavi support

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- ❖ Gavi approved the inclusion of rabies human rabies vaccines in its Vaccine Investment Strategy (VIS) in 2018
- ❖ Implementation was delayed by the COVID-19 pandemic and VIS 2018 is now under review

- ❖ To find out more, please contact United Against Rabies: [globalrabiescoordinator@woah.org](mailto:globalrabiescoordinator@woah.org)



# Curious? Join United Against Rabies!



The United Against Rabies Forum welcomes partners from all sectors.

Visit [www.UnitedAgainstRabies.org](http://www.UnitedAgainstRabies.org) for more information about how to join as well as case studies and practical tools to help design and implement effective rabies control plans.

Sign up to receive updates and invitations to webinars and events.

Thank you!





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