Ashok: Welcome to this special programme on rabies. My name is Ashok Moloo.

Later, we’ll be joined by Dr Bernadette Abela-Ridder, Team Leader of the Neglected Zoonotic Diseases unit of the WHO Department of Control of Neglected Tropical Diseases, and by three other rabies experts:

1. Dr Deborah Briggs, Executive Director of the Global Alliance for Rabies Control
2. Dr Kevin Leroux, Rabies Project Manager, Bill and Melinda Gates Foundation Project in KwaZulu Natal, South Africa; and
3. Dr Betsy Miranda, Coordinator of the Global Alliance for Rabies Control in Asia.

But first, what is rabies?

We know that rabies is a disease that is transmitted from animals to humans and is caused by a virus.

What we may not know is that infected animals carry the rabies virus in their saliva.

Rabies is transmitted to a human being when an animal, infected with this virus, bites that person.

Rabies infection can also occur if a person has an open wound that comes into contact with the saliva of an infected animal.

The virus that causes rabies attacks the central nervous system, inducing terrible symptoms and eventually death.

Almost 9 out of every 10 people are infected after being bitten by a dog that carries the rabies virus.

My first question goes to Dr Bernadette Abela-Ridder.

Ashok: Dr Abela Ridder, how serious is the problem of rabies today?

Dr Abela-Ridder: Rabies remains a significant cause of human death and suffering in especially poor communities and these could be both rural and urban. The problem is low awareness about the dangers to the exposure of dog-bites from rabid animals. And of course difficult access to both veterinary and medical care.

So … one should also be aware that you can get rabies from animals … dogs are the main vehicle, but wild-life in some places of the world like South America are a significant source of rabies.

Ashok: Also on the phone is Dr Deborah Briggs, Executive Director of the Global Alliance for Rabies Control. Dr Briggs, the Global Alliance estimates that 60 000 people die each year from rabies. How reliable are these data?

Dr Briggs: Well, it’s widely recognized that the number of human deaths officially reported are greatly underestimated … and I would point out that reliable data indicating the true incidence of human rabies are really scarce or non-existent in many countries basically because there are no reports of the deaths and people often go home to die.

Ashok: Rabies is an acute and progressive viral infection. Although it is a major zoonosis, it can be eliminated. So how do you explain that despite such technical progress over the last 100 years, for example, rabies still remains a disease of neglect and represents a modern public-health conundrum?
**Dr Briggs:** Well, I would say that rabies actually is mainly the disease of poverty, affecting populations that are often without any resources to buy vaccines or anti-rabies biological and often they cannot even afford the transport costs to get to a clinic where the rabies vaccine may or may not be available. And thus, it remains neglected.

**Ashok:** Dr Abela-Ridder, how can people prevent getting infected by rabies?

**Dr Abela-Ridder:** There are some key interventions ... some key things. One is improving the awareness both at community level but also increasing the education in schools about exposure to diseases that come from animals, including rabies.

Of course, there’s a big component of responsible dog-ownership and if one is bitten, then very simple interventions like washing the wound with soap and water immediately are so important before even trying to seek medical care. This could actually stop the infection going into the brain ... so these are very simple things that need to be increased and together it will have an effect on the reduction of rabies.

**Ashok:** We believe children are mostly affected? Why are children mostly affected?

**Dr Abela-Ridder:** Well, children have a playful nature .. they are small .. they also sometimes have a lack of authority when playing with animals ... so this makes them more vulnerable. Again, they’re unaware of the dangers that they’re exposed to and also they can hide bites from their parent because they’re worried of getting into trouble.

**Ashok:** Dr Kevin Leroux is Rabies Project Manager for the Bill and Melinda Gates Foundation Project in KwaZulu-Natal in South Africa.

Dr Leroux, you’ve had some success in KwaZulu Natal in South Africa. What has led to this success?

**Dr Leroux:** Well over the years, we noticed that when we've had success, it’s always been at the hands of the champion – a single person who’s taken the cause and ran with it and so we established a single point of reference in South Africa – a project with that one champion at the head of it to actually coordinate every aspect of rabies, its research, its control and son on.

The second thing is that we started doing demonstration projects small projects to demonstrate that we are determined to control this disease and we did some research so that we could then show to people that we had a purpose of what we were doing and through that it became a whole network of international experts that started working with us with technical advice and so on. And as this project improved and we could show and demonstrate directions for South Africa, international organizations got involved. The project has now moved into five countries around South Africa and of course all the Provinces around Kwazulu Natal.

**Ashok:** And Dr Briggs, how do you assess the current support from policy-makers and the motivation to introduce rabies control measures?

Well, rabies is often considered insignificant and therefore, as we mentioned, it’s neglected. This translates into little motivation to implement disease control measures and in the end it’s the poorest people who’re often most effected, who’re at risk of exposure and death from rabies. And this segment of the society is just often overlooked.

**Ashok:** So, Dr Leroux, how did you engage people to get involved to that extent?
Dr Leroux: I believe it was because of these demonstration projects where we showed some research and the local universities, the local veterinaries and so on ... they all saw what we were doing and this message just spread and we had international experts come out here ... and they came to visit us .. saw what we were doing .. and then the word spread and then we managed to talk it in international conference.

Ashok: I believe that there’s a vaccine bank project that you have initiated Dr Leroux. Can you tell us something about that?

Dr Leroux: Yes, that was a decision made by the World Health Organization after they saw the interest that the project generated ... the natural momentum that it had. So we had calls from our neighbouring countries Swaziland, Lesotho .. please help us with some vaccines ... we don’t have any. We have had request from Mozambique. We’ve started working there on the borders as well, as they also want to join this.

Ashok: Dr Betsy Miranda is the Coordinator of the Global Alliance for Rabies Control in Asia. Dr Miranda, thank you for joining us from the Philippines, which at one point ranked among the 10 top countries for human rabies deaths. You have some success stories to share with us from the Philippines, don’t you?

Dr Miranda: Yes. The Philippines has a national anti-rabies law since 2007 and the national goal is to eliminate dog-mediated rabies by 2020. This lines up nicely with the regional rabies elimination goal, of the Association for South East Asian Nations also by 2020. In the Philippines, we have a number of community focused initiatives underway to model comprehensive intersectoral through one-health rabies elimination campaigns. Our very first project in the Philippines is in Bohol Province and this was an attempt to eliminate dog rabies in partnership with the local government. And this project has shown that investing on targeting the disease at its source, which are dogs like here in the Philippines and most of Asia, this has drastically reduced the number of human rabies cases within the first two years of its implementation.

Ashok: Dr Leroux, so if you were to share this success with your colleagues in other countries where rabies is widespread, what advice would you give to them?

Dr Leroux: I would really say they must just start somewhere ... you know each country is unique and when we did this, we started by being passionate about this, having a small group who’s dedicated to it, we evaluated everything that we did from top to bottom to see where we were going right where we were going wrong, how can we improve. And through the credible network of people we got these international experts who could put technical advice into us through the rabies blueprint which we eventually started inputting into .. get that group of people behind you ... tell the world about .. and I’m quite sure that support will follow that.

Ashok: Dr Miranda, how do you assess, then, the importance of surveillance and the role of engaging volunteers in making rabies elimination a success?

Dr Miranda: A lot of our work with communities is to promote and support school based and community based education programmes. These programmes are designed to improve awareness about rabies prevention and responsible pet-ownership among school children and among people in the community. And we work very closely with the department of education, the department of agriculture and the department of health. Our successful engagement of local communities resulted in a community-focused programme that increased our total workforce for rabies elimination from a few government employees to thousands of volunteers that we’ve been able to
mobilize. And because of this we promoted a sense of programme ownership and a majority of the households that we survey believe now that rabies control and prevention is good for the communities and their compliance to local regulations will improve when it comes to dog population control, to mandatory dog registration and vaccination … we’ve seen a marked improvement in community compliance.

**Ashok:** Dr Miranda, thank you very much for sharing your ideas with us.

**Dr Miranda:** Thank you, thank you very much.

**Ashok:** We’ve come to the end of today’s programme, which focused mainly on human rabies.

During our discussion it emerged that although rabies is a preventable disease, it poses a substantial threat to human health.

Today, we are better prepared to educate people about the danger rabies poses and the benefits of eliminating the disease in domestic dogs, which are mostly responsible for transmitting rabies to humans.

I’d like to thank Dr Bernadette Abela-Ridder, Team Leader of the Neglected Zoonotic Diseases unit of the Department of Control of Neglected Tropical Diseases;

Dr Deborah Briggs, Executive Director of the Global Alliance for Rabies Control;

Dr Kevin Leroux, Rabies Project Manager, Bill and Melinda Gates Foundation Project, Kwazulu Natal in South Africa.

Dr Betsy Miranda, Coordinator of the Global Alliance for Rabies Control in Asia for their participation.

My name is Ashok Moloo and I thank you for listening.