

# **The Success of the ABC-AR\* Programme in India**

(\*Animal Birth Control – Anti-Rabies)

**A study of the ABC-AR programme and a comparison with the earlier catch-and-kill procedure conclusively shows the success and feasibility of the former in both the control of the street dog population and the incidence of rabies in dogs and humans. Chennai has had no human rabies from 2007 till 2010; down from 120 deaths in 1996.**

**Dr. S. Chinny Krishna**

The bond between man and dog had its beginning 12-14 millennia ago somewhere in Eurasia where a reciprocal relationship between them first emerged. Provided with scraps of food when approaching the early encampments and settlements of man, the wolf soon became a frequent and welcome visitor, warning man of imminent danger and later assisting him in the hunt for wild animals. Thus began the domestication of the dog and the establishment of a bond between man and animals that has no equal. Today, man violates that bond by allowing dogs to breed excessively and then abandoning them in great numbers, thus creating hazards for the dogs themselves as well as a considerable health risk to human society. All too often, authorities confronted with the problems caused by these dogs have turned to mass destruction in the hope of finding a quick solution, only to discover that the destruction had to continue, year after year, with no end in sight. Moreover, by reducing temporarily the population of straying dogs, the authorities had improved the chances of survival of the remainder and provided fresh opportunities for newly-abandoned dogs. It is now becoming recognised that removal of surplus dogs cannot solve the problem unless combined with other measures such as registration and neutering of dogs and education of the public <sup>(1)</sup>

At a certain population density the birth rate and the death rate become equal, the population comes to an equilibrium, population growth levels off. This more realistic description of population growth is referred to as logistic growth. The upper limit at which population growth levels off is called the carrying capacity of the environment. Each habitat has a specific carrying capacity for each species. This specific carrying capacity essentially depends on the availability, distribution and quality of the resources (shelter, food, water) for the species concerned. The density of a population of higher vertebrates (including dogs) is almost always near the carrying capacity of the environment. Any reduction in population density through additional mortality is rapidly compensated by better reproduction and survival. In other words, when dogs are removed, the survivors' life expectancy increases because they have better access to the resources, and there is less competition for resources. <sup>(2)(3)(4)</sup>

In 1964, appalled by the horrific way the Corporation of Madras was killing street dogs, the Blue Cross of India began to study this issue. We were surprised to learn that the Madras Corporation - at 300 years one of the oldest Corporations in the world - started its catch-and-kill programme in 1860. Dogs regarding which complaints were received were often shot on the street and the complaints generally were about dogs which were biters and, therefore, suspected to be rabid. Section 218 of The Madras City Municipal Corporation Act of 1919 authorised catching and killing any dog on the street which did

not have a licence tag. S. Theodore Baskaran, the former Post Master General of Tamil Nadu states, and I quote: “In the early 1970s, the number of stray dogs destroyed by the Corporation was so high that the Central Leather Research Institute, Madras, designed products – such as neckties and wallets – from dog skins” (5). The number of dogs being killed by the Corporation continued to rise after this period. So did the number of dogs on the street and so did the number of cases of human rabies deaths.

The Blue Cross was convinced that if a procedure designed to control or eliminate street dogs had not showed positive results after implementing it for over a 100 years, something was wrong. It was also convinced that where a dog had to be killed because it was overly aggressive or suspected to be rabid, the killing must be done in a more humane manner.

In 1964, the Blue Cross proposed that a more humane and viable solution to prevent the visible increase in the number of street dogs and the number of cases of human rabies was by a sustained catch-and-sterilize programme coupled with vaccination against rabies. It decided to call the programme the Animal Birth Control programme or the ABC programme to show that the control of the street dog population was as easy as ABC.

As could be expected, the Madras Corporation’s response was to reject the proposal outright. The Blue Cross kept up the pressure on the Corporation and began to spay/sterilize all street dogs rescued by it. After treatment, the dog would be spayed, vaccinated and released at the same spot from where it had been picked up. Owners were also encouraged to have their pets spayed and vaccinated free of charge. A few hundred operations were done each year but the number of street dogs showed no signs of coming down. After a few years, we realised that each area had its “holding capacity” for street dogs and this was determined by the availability of food sources. In most cases, this source was a garbage dump and many of the dogs around these places were emaciated and mangy.

In most cases, this source was a garbage dump and many of the dogs around these places were emaciated and mangy. In the meantime, from an average of less than one dog per day in 1860, the number of dogs killed by the Corporation went upto as high as 135 dogs per day in 1995.

In 1990, WSPA and WHO brought out their “Guidelines for Dog Population Management” followed by WSPA’s guidelines for “Stray Dog Control”. And this is what the report, authored by Dr. K. Bogel, Chief Veterinarian, Public Health Unit, WHO in Switzerland and John Hoyt, says: “All too often, authorities confronted with the problems caused by these dogs have turned to mass destruction in the hope of finding a quick solution, only to discover that the destruction had to continue, year after year with no end in sight”. Albert Einstein defined insanity as doing the same thing over and over again expecting different results. The age-old method of catch-and-kill has not worked and never will.

It was in 1995 that the Blue Cross was finally able to get the Corporation of Madras to agree to try out ABC as an alternate to killing in a part of South Madras. We realised that a city-wide ABC programme would have been the ideal solution but the Corporation Commissioner, Mr. M. Abul Hassan, asked us to start the programme and then increase its scope. The only assurances he gave us was that he would personally monitor the

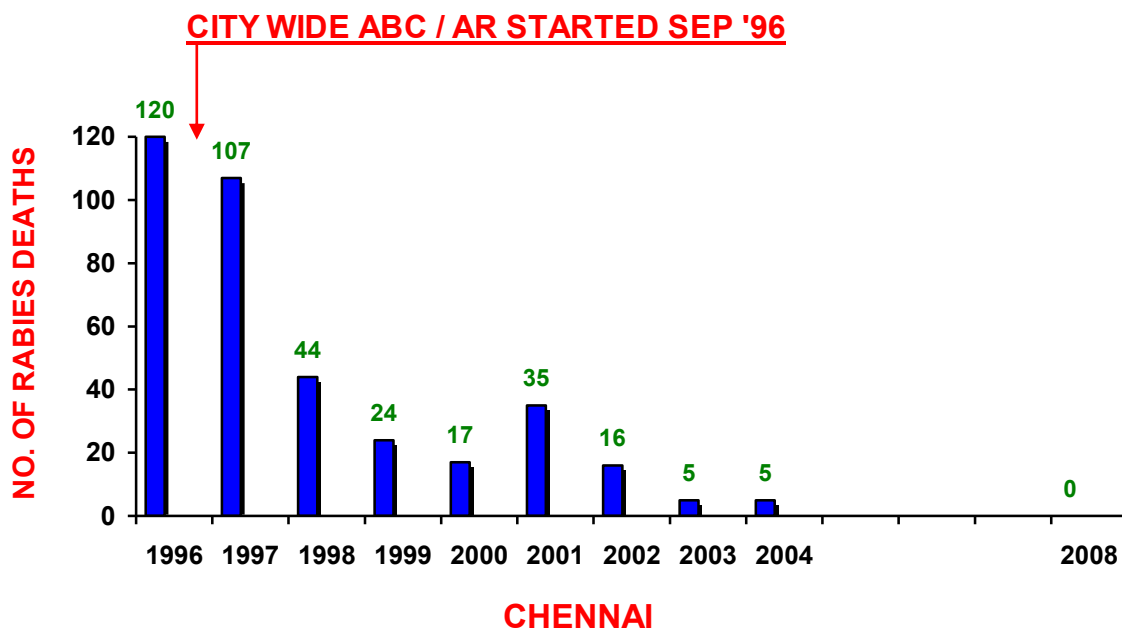
programme and that no dog which had been spayed and vaccinated would be caught. Dogs in the area not covered by the ABC programme would continue to be caught and killed by electrocution. The total cost of the programme was to be met by the Blue Cross.

Chennai and Jaipur were the first cities to start sustained ABC-AR programmes. Within six months, results in the areas covered by the Blue Cross ABC programme were promising enough to prompt the Corporation to extend the programme to the whole of South Madras. By a stroke of luck, Mr. Abul Hassan became the Special Officer – equal to Mayor – of the Corporation. People for Animals agreed to take up ABC in North Madras and the Corporation converted its electrocution chamber to an ABC centre.

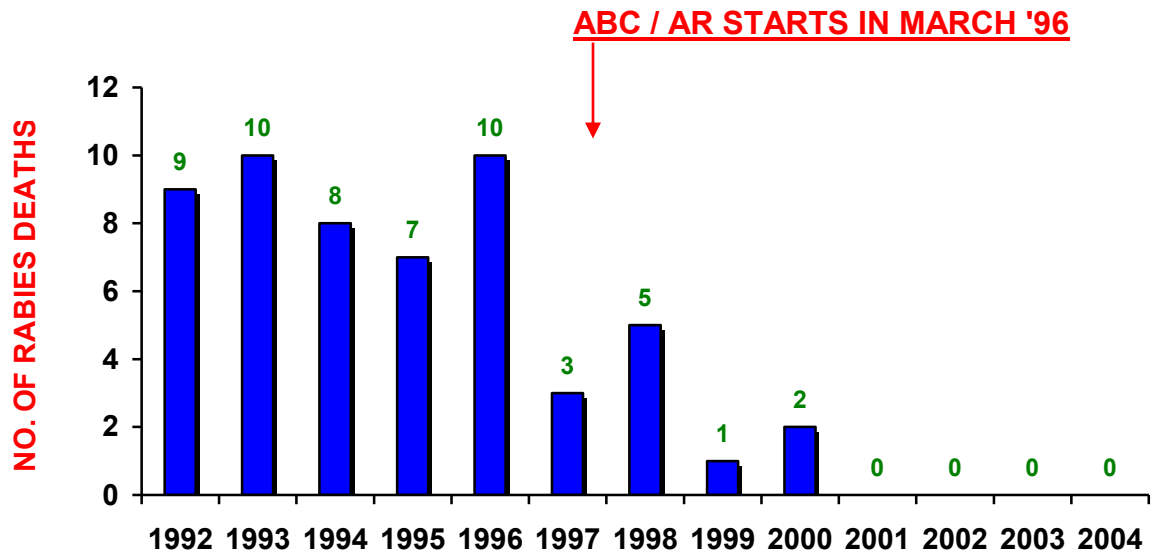
Several cities have taken up ABC but in many cases it has not been a sustained programme. In many places where the ABC programme was being implemented, local municipalities suddenly ordered the destruction of dogs on a massive scale in a knee-jerk reaction to complaints and the dogs destroyed were usually the ones that had been spayed and vaccinated at great expense and effort.

The World Health Organisation-sponsored multi centric study of rabies in India for the period 1993 to 2002 showed that the incidence of human rabies cases in India was more or less at the same level during this period at about 17,000 cases per year <sup>(7), (8)</sup>

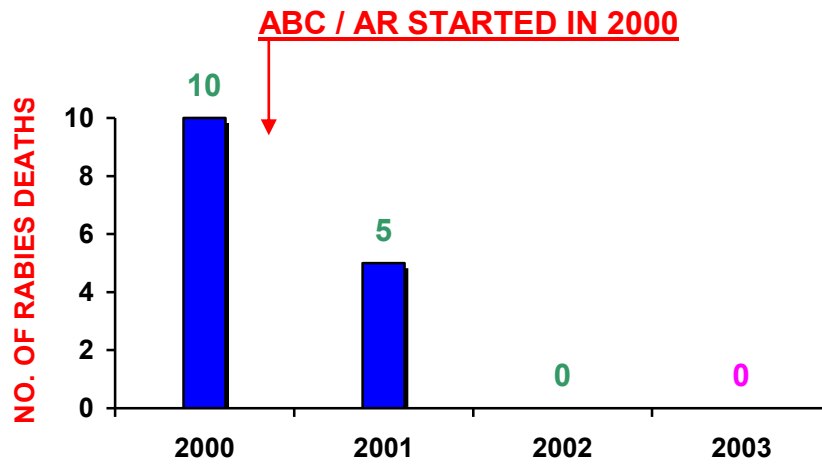
The purpose of the ABC programme is to bring down the number of street dogs in a humane manner and, more importantly, to bring down the number of cases of rabies. To see whether this has been a success, let us look at the cases of human rabies in three places where the ABC-AR programme has been implemented.



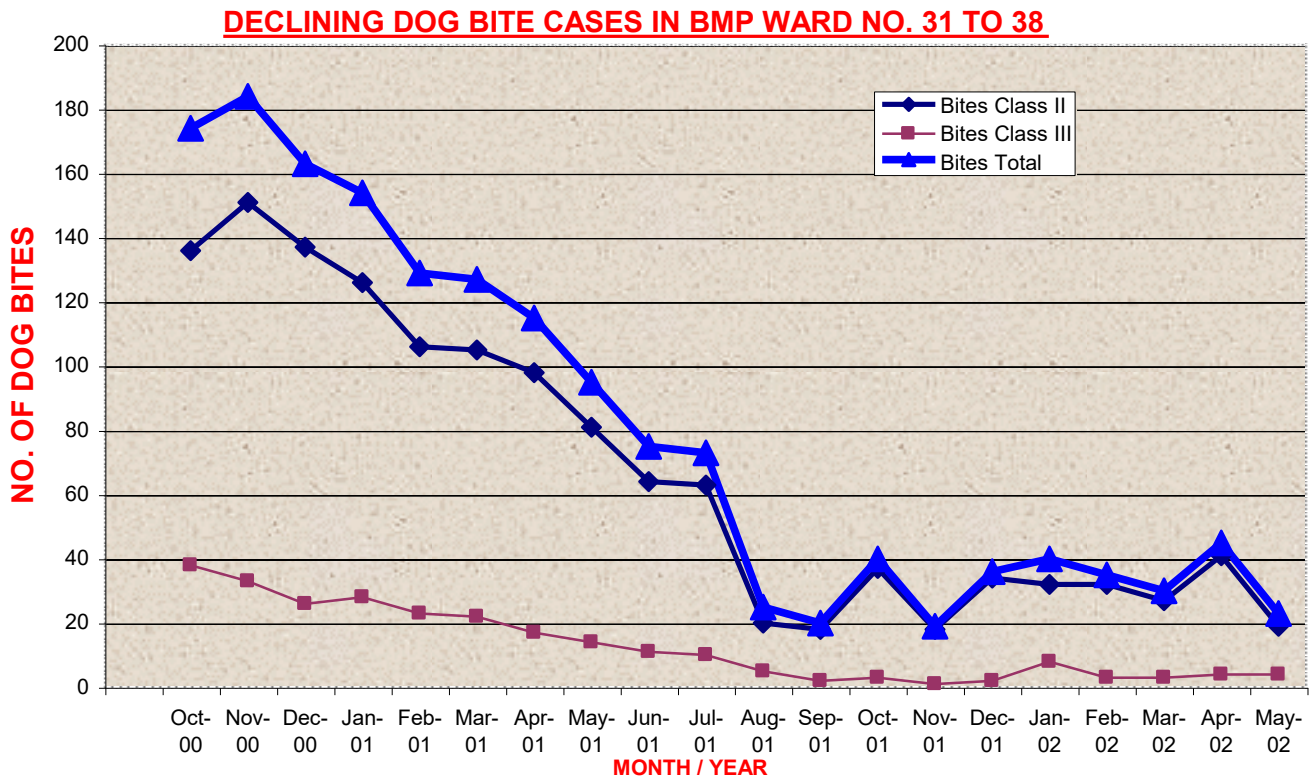
Figures courtesy Ministry of Health & Family Welfare Government of Tamil Nadu except for 2003 given by the Corporation of Chennai 2004 figure given by Dr. Manivasan, Deputy Commissioner (Health), Chennai Corporation at the Seminar on "Roadmap for Rabies Free India" at Chennai Aug 2006 and for 2008 given by Dr. B. Kuganatham, Health Officer, Chennai Corporation, to Times of India on June 9, 2009. Report on page 10.



**JAIPUR- WALLED CITY**



**KALIMPONG**



Bangalore is another example of both the failure of catch and kill as well as the efficacy of spay, vaccinate and return. In the past, from 1936 to 1999, the policy of the Bangalore City Corporation was to kill stray dogs by electrocution and to vaccinate pet dogs by Neural Tissue Vaccine (NTV). It was observed that in spite of killing more than 25 million dogs during this period, the dog population continued to increase with increase in number of dog bites and number of human rabies deaths. From October 2000, the Bangalore City Corporation decided to adopt Animal Birth Control (ABC) programme as a method of dog population control. In this programme the street dogs are caught, sterilized, vaccinated with model Cell Culture Vaccines (CCV) and left back in the same place from which they were caught. It was decided to increase the number of street dogs caught from 16,800 to 40,000 per year in the coming years. Simultaneously, there has been effective garbage management under operation with door to door clearing of waste material. All these has resulted in reduction in dog population, reduction in dog bite cases and reduction in rabies deaths <sup>(6)</sup>

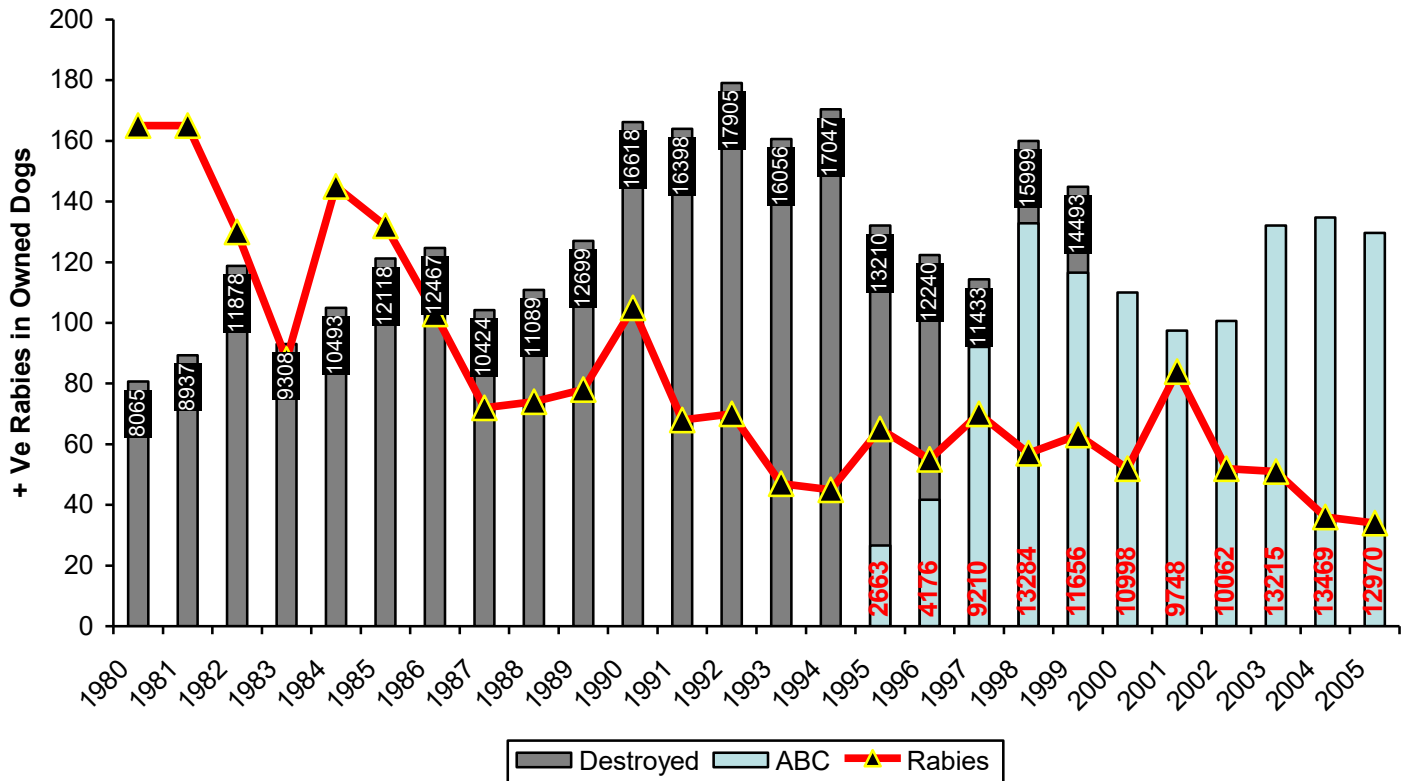
1. In the case of Madras, the human population has increased tremendously in the last few years due to influx of people from rural areas as well as due to the expanding city limits.
2. The awareness level regarding rabies has increased thanks to TV and radio and a far higher percentage of cases are reported today than five years ago.
3. Even a few years ago, a village person, living in a city, who was not well would often go away to his or her village to seek “traditional” treatment. Many dog bite victims did so, too.

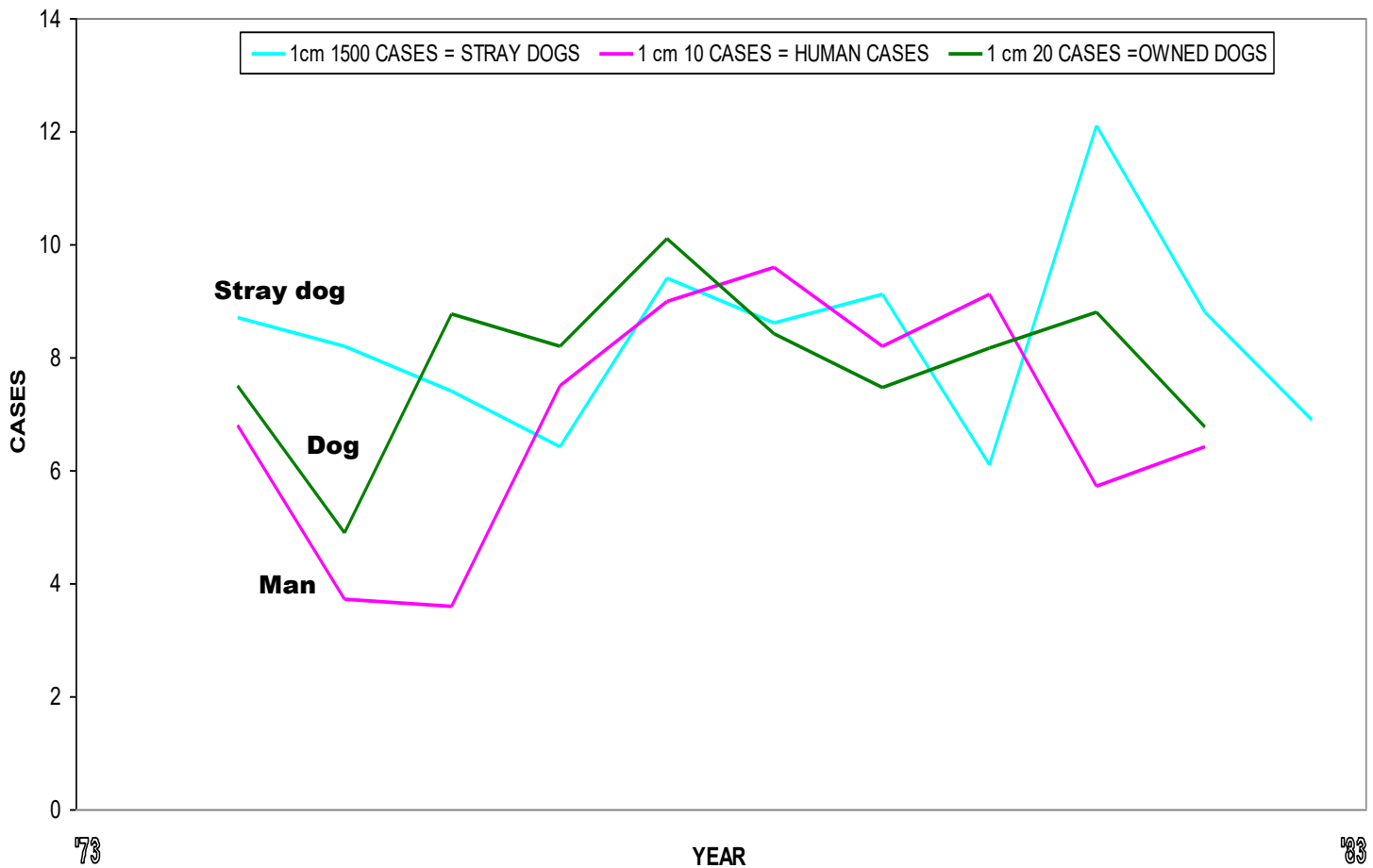
4. In Kalimpong, the results have been most impressive because it has a population of about 70,000 but over 2000 dogs are covered each year.

We find a steady decrease in human rabies cases in those places where a proper ABC-AR programme is being carried out.

The Jaipur programme as reported in The Veterinary Record, September 16, 2006 reports a decline in the dog population by 28 per cent in the period 1992-2002 due to the ABC programme with a decline in human rabies cases to zero in the programme area *but with an increase in other non-programme areas.* (9)

**Trend of Occurrence of Rabies in Owned Dogs in Chennai in relation to procedures of Destruction /ABC Surgery (1980 -2005)**





### Parallel trend in owned dogs & human beings

A study made by Prof. Dr. V. N. Appaji Rao,<sup>(10)</sup> Vice-Chairman of the Animal Welfare Board of India clearly shows that the number of rabies cases in dogs brought to the Madras Veterinary Hospital over the 25 year period, 1980 to 2005, of which the nine years 1996-2005 are after the city-wide ABC-AR programme replaced the catch-and-kill programme in Chennai city, bears a direct correlation to the number of street dogs sterilized and vaccinated. The study is based on the figures provided by the Chennai Corporation and the Tamil Nadu University of Veterinary Sciences (TANUVAS). Since the Corporation was not handing over any dogs for sterilization to the Blue Cross or any other NGO till 1995, the figures shown do not reflect the approximately 2000 dogs being sterilized each year by the Blue Cross right through the period of the study. Most sadly, many of the dogs sterilized and vaccinated by us at great effort and expense were subsequently caught and destroyed by the Corporation even though they were ear notched. The fact is that a sterilized street dog having been closely handled by humans once are easier to catch and hence were re-captured by the Corporation dog catchers and destroyed.

That ABC-AR does indeed work and is the only solution to the street dog issue is beyond doubt. What is now needed is the co-operation of the local municipalities and corporations

to implement it properly. The Chennai of Corporation has been a trend setter and shown the way to other municipalities and local bodies.

It is also most heartening that the Government of India's Ministry of Environment and Forests has now released the information that it is working with the Ministries of Health and Family Welfare and also the Department of Animal Husbandry to take up the ABC-AR programme in a most aggressive way by strictly implementing the ABC Rules of 2001 while at the same time going in for an oral anti-rabies vaccine to make India rabies-free within a few years. The National Workshop at Delhi organized by Maj Gen Dr. R. M. Kharb, Chairman of the AWBI on September 21 and 22, 2006 was unanimous in asking for a strict implementation of the existing ABC Rules including the sections on registration of dog breeders.

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- (1) Bogel, K, and Hoyt, J.A. 1990: Guidelines for Dog Population Management– WHO and WSPA
- (2) Beck, A.M., 1973: The ecology of stray dogs: a study of free-ranging urban animals. York Press, Baltimore.
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- (5) Madras Musings, December 16-31, 2002.
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- (7) “National Multi Centric Rabies Survey ” – report presented by Dr. M. K. Sudarshan at the 5<sup>th</sup> National Conference on Prevention of Rabies at Bhubaneshwar on 5<sup>th</sup> and 6<sup>th</sup> July, 2003.
- (8) Assessing Burden of Rabies in India, WHO-sponsored National Multi-Centric Rabies Survey, Final Report – May 2004.
- (9) Reece, J.F. and Chawla, S.K. – “Control of rabies in Jaipur, India, by the sterilization and vaccination of neighbourhood dogs” – *The Veterinary Record*, September 16, 2006.
- (10) Appaji Rao, Dr.V.N., Road map to a rabies-free India, AWBI, July 2006

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## **Zero-rabies city shows the way to small towns**

10 Jun 2009, 0503 hrs IST, TNN

<http://timesofindia.indiatimes.com/Chennai/Zero-rabies-city-shows-the-way-to-small-towns/articleshow/4637380.cms>

CHENNAI: See what dogged determination can do. The incidence of the dreaded rabies disease, which has plagued [India](#) for years, has been virtually

eradicated from the city. According to the department of health, Chennai Corporation, no cases of rabies were reported in the last one year.

"There has been no case of rabies in the last one year, and in the last three years, complaints of stray [dogs](#) have come down drastically," said corporation health officer Dr B Kuganantham, attributing it to better community care of street dogs. The number of deaths due to rabies had been decreasing steadily since 1996, when the corporation adopted the Animal Birth Control-Anti-Rabies (ABC-AR) programme. There were 120 deaths due to rabies reported in 1996. The number came down to five by mid-2000.

The ABC-AR programme consists of a process of sterilisation to control stray dog population and vaccination to prevent rabies. The success of the programme hinges upon the sterilisation of 70% of the dog population in a given area within one reproductive cycle, which is normally six months. According to the corporation, over 80% of the dogs in Chennai have been sterilised. The current dog to human ratio is pegged at 1: 40.

The overwhelming success of the programme in the city has led to its implementation in other parts of the state. Until now the programme was restricted to five corporations and 50 municipalities but the state level co-ordination committee, the first to be set up in the country early this June, decided to extend the programme to 561 smaller towns in [Tamil Nadu](#).

"When was the last time you saw a dozen puppies suckling its mother on a Chennai street? ABC is a humane approach to avoid killing of stray dogs in urban environs," said D Rajasekar, secretary, Animal Welfare Board of [India](#) (AWBI).

Animal welfare organisations like People for Animals (PfA), Blue Cross of [India](#) (BCI) and the Society for the Prevention of Cruelty to Animals have also played a major role in the success of the programme. The ABC program was first conceived by the Blue Cross in 1966. In 1964, an estimated 16,000 dogs were killed by the corporation, said BCI honorary secretary Saraswathi Haksan. The ABC programme was conceived as an alternative to this.

The programme has found mention in the timeline of Environmental Milestones released recently by Radford University, Virginia. The ABC programme, which has been endorsed by the WHO as a viable long-term solution to the stray dog problem, is being implemented in several parts of the country, including all the metros. As of 2007, India had an estimated 20,000 deaths due to rabies annually, the highest in the world, according to a survey done by the Rabies in Asia (RIA) Foundation.

**BLUE CROSS OF INDIA'S ABC PROGRAMME INCLUDED AS MILESTONE EVENT IN INTERNATIONAL ENVIRONMENTAL TIMELINE BY RADFORD UNIVERSITY. USA. <https://php.radford.edu/~wkovarik/drupal/?q=node/26> and node/19.**