

APPENDIX 2 Reference sources for parameter estimates provided in Tables 1-4.

Appendix 2a. Reference sources for human:dog ratio estimates (Table 1)

Atickem, A. Carnivores in Bale Mountains National Park. MSc thesis. Addis Ababa: University of Addis Ababa; 2003.

Bachmann M. Rabies control - varying strategies for different communities. In: Bishop, GC, editor. *Proceedings of the Second International Symposium of the Southern and East African Rabies Group*, 29-30 April 1993. Pietermaritzburg, South Africa, pp. 40-48.

Bingham J. Rabies on Flores Island, Indonesia: is eradication possible in the near future? In: Dodet, B, Meslin, F-X, Heseltine, E, editors. *Proceedings of the Fourth International Symposium of Rabies Control in Asia, 5-9 March 2001*. Hanoi, Vietnam. Paris: John Libbey Eurotext, pp. 148-155.

Bishop GC. Increasing dog vaccination coverage in South Africa: is oral vaccination the answer? In: Dodet, B, Meslin, F-X, Heseltine, E, editors. *Proceedings of the Fourth International Symposium of Rabies Control in Asia, 5-9 March 2001*. Hanoi, Vietnam. Paris: John Libbey Eurotext, pp. 105-109.

Brooks R. Survey of the dog population of Zimbabwe and its level of rabies vaccination. *Vet Rec.* 1990; **127**: 592-596.

Butler JR, Bingham J. Demography and dog-human relationships of the dog population in Zimbabwean communal lands. *Vet Rec.* 2000; **147**: 442-446.

Childs JE, Robinson LE, Sadek R, Madden A, Miranda ME, Miranda NL. Density estimates of rural dog populations and an assessment of marking methods during a rabies vaccination campaign in the Philippines. *Prev. Vet Med* 1998; **33**: 207-218.

Chî LM. Animal rabies control in Vietnam. In: Dodet, B, Meslin, F-X, Heseltine, E, editors. *Proceedings of the Fourth International Symposium of Rabies Control in Asia, 5-9 March 2001*. Hanoi, Vietnam. Paris: John Libbey Eurotext, pp. 257-259.

- Cleaveland S, Dye C. Maintenance of a microparasite infecting several host species: rabies in the Serengeti. *Parasitology* 1995; **111**: S33-S47.
- Cleaveland S, Kaare M, Tiringa P, Mlengeya T, Barrat J. A dog rabies vaccination campaign in rural Africa: impact on the incidence of dog rabies and human dog-bite injuries. *Vaccine* 2003; **21**: 1965-1973.
- Coleman P. The epidemiology and control of domestic dog rabies. PhD thesis. London: University of London; 1998.
- De Balogh KK, Wandeler AI, Meslin FX. A dog ecology study in an urban and a semi-rural area of Zambia. *Onderstepoort J Vet Res.* 1993; **60**: 437-443.
- Edelstein RM. Epidemiology and control of rabies in Malawi. *Tropical Animal Health Production* 1995; **27**: 155-163.
- Estrada R, Vos A, De Leon R, Mueller T. Field trial with oral vaccination of dogs against rabies in the Philippines. *BMC Infect.Dis.* 2001; **1**: 23-30.
- Harischandra PAL. Dog vaccination coverage and oral rabies vaccination in Sri Lanka: an update. In: Dodet, B, Meslin, F-X, Heseltine, E, editors. *Proceedings of the Fourth International Symposium of Rabies Control in Asia, 5-9 March 2001*. Hanoi, Vietnam. Paris: John Libbey Eurotext, pp. 97-100.
- Hill FWG. A survey of the animal population of four high density suburbs in Harare. *Zimbabwe Veterinary Journal* 1985; **16**: 31-36.
- Kayali U, Mindekem R, Yémadji N, Oussiguéré A, Naïssengar S, Ndoutamia AG, Zinsstag J. Incidence of canine rabies in N'Djaména, Chad. *Submitted*, 2003.
- Kitala P, McDermott J, Kyule M, Gathuma J, Perry B, Wandeler A. Dog ecology and demography information to support the planning of rabies control in Machakos District, Kenya. *Acta Trop.* 2001; **78**: 217-230.
- Laurenson K, Esterhuysen J, Stander P, Van Heerden J. Aspects of rabies epidemiology in Tsumkwe District, Namibia. *Onderstepoort J Vet Res.* 1997; **64**: 39-45.

- Matter HC, Wandeler AI, Neuenschwander BE, Harischandra LP, Meslin FX. Study of the dog population and the rabies control activities in the Mirigama area of Sri Lanka. *Acta Trop.* 2000; **75**: 95-108.
- Mitmoonpitak C, Tepsumethanon V, Raksaket S, Nayuthaya AB, Wilde H. Dog-bite injuries at the animal bite clinic of the Thai Red Cross Society in Bangkok. *J.Med.Assoc.Thai.* 2000; **83**: 1458-1462.
- Negi AB. Animal rabies in India. In: Dodet, B, Meslin, F-X, Heseltine, E, editors. *Proceedings of the Fourth International Symposium of Rabies Control in Asia, 5-9 March 2001.* Hanoi, Vietnam. Paris: John Libbey Eurotext, pp. 214-217.
- Oboegbulem SI, Nwakonobi IE. Population density and ecology of dogs in Nigeria: a pilot study. *Rev.sci.tech.Off.int.Epiz.* 1989; **8**: 733-745.
- Pal SK. Population ecology of free-ranging urban dogs in West Bengal, India. *Acta Theriologica* 2001; **46**: 69-78.
- Perry BD, Brooks R, Foggin CM, Bleakley J, Johnston DH, Hill FW. A baiting system suitable for the delivery of oral rabies vaccine to dog populations in Zimbabwe. *Vet Rec.* 1988; **123**: 76-79.
- Perry BD. Dog ecology in eastern and southern Africa: implications for rabies control. *Onderstepoort J Vet Res.* 1993; **60**: 429-436.
- Rautenbach GH, Boomker J, Devilliers IL. A descriptive study of the canine population in a rural town in southern Africa. *Journal of the South African Veterinary Association.* 199; **62**: 158-162.
- Sagarasaeranee P, Puanghat A, Kasempimolparn S, Khawplod P. Efficacy of oral rabies vaccine in dogs in Thailand. In: Dodet, B, Meslin, F-X, Heseltine, E, editors. *Proceedings of the Fourth International Symposium of Rabies Control in Asia, 5-9 March 2001.* Hanoi, Vietnam. Paris: John Libbey Eurotext, pp. 101-104.
- Shu-Xian Z. Epidemiology of rabies and control of dog rabies in China. In: Dodet, B, Meslin, F-X, Heseltine, E, editors. *Proceedings of the Fourth International*

Symposium of Rabies Control in Asia, 5-9 March 2001. Hanoi, Vietnam. Paris: John Libbey Eurotext, pp. 88-90.

Sudarshan MK, Mahendra BJ, Narayan DH. A community survey of dog bites, anti-rabies treatment, rabies and dog population management in Bangalore city. *J Commun.Dis.* 2001; **33**: 245-251.

Wandeler AI, Matter HC, Kappeler A, Budde A. The ecology of dogs and canine rabies: a selective review. *Rev.sci.tech.Off.int.Epiz.* 1993; **12**: 51-71.

World Health Organization. Report of WHO Consultation on Dog Ecology Studies Related to Rabies Control, 22-25 February 1988. Geneva: World Health Organization; 1988. WHO/Rab.Res./88.25.

World Health Organization. Strategies for the control and elimination of rabies in Asia. Report of a WHO Interregional Consultation. Geneva: World Health Organization; 2003. Unpublished document WHO/CDS/CSR/EPH/2002.8.

Appendix 2b. Reference sources for parameter estimates provided in Tables 2-4

1. Acha PN, Arambulo III PV. Rabies in the tropics - history and current status. In: Kuwert E, Mérieux C, Koprowski H, Bögel K. Rabies in the Tropics. Berlin: Springer Verlag, 1985:343-59.
2. Cleaveland S, Fèvre EM, Kaare M, Coleman PG. Estimating human rabies mortality in the United Republic of Tanzania from dog bite injuries. *Bulletin of the World Health Organization* 2002;80:304-10.
3. Kitala PM, McDermott JJ, Kyule MN, Gathuma JM. Community-based active surveillance for rabies in Machakos District, Kenya. *Preventive Veterinary Medicine* 2000;44:73-85.
4. Ali YH. Outbreak of rabies in South Darfur, Sudan. *Veterinary Record* 2002;150:610-2.
5. Kamoltham, T., Singhsa, J., Promsaranee, U., Sonthon, P., Mathean, P., and Thinyounyong, W. Elimination of human rabies in a canine endemic province in Thailand: five-year programme. *Bulletin of the World Health Organization* 2003; 81:375-81.
6. Kayali, U., Mindekem, R., Yémadji, N., Oussiguéré, A., Naïssengar, S., Ndoutamia, A. G., and Zinsstag, J. Incidence of canine rabies in N'Djaména, Chad. *Preventive Veterinary Medicine* 2003; 61:227-33.
7. Sudarshan MK, Mahendra BJ, Narayan DH. A community survey of dog bites, anti-rabies treatment, rabies and dog population management in Bangalore city. *Journal of Communicable Diseases* 2001;33:245-51.
8. Ezeokoli CD, Umoh JU. Epidemiology of rabies in northern Nigeria. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 1987;81:268-72.
9. Mitmoonpitak C, Tepsumethanon V, Wilde H. Rabies in Thailand. *Epidemiology and Infection* 1998;120:165-9.

10. Yimer E, Newayeselassie B, Teferra G, Mekonnen Y, Bogale Y, Zewde B et al. Situation of rabies in Ethiopia: a retrospective study 1990-2000. *Ethiopian Journal of Health Development* 2002;16:105-12.
11. Proceedings of the 1st Southern and East African Rabies Group, Lusaka, Zambia, 2-5 June 1992. King, A. A. 1992. Lyon, Editions Fondation Mérieux.
12. Proceedings of the 5th Southern and East African Rabies Group/World Health Organization meeting, Entebbe, Uganda, 29-31 March 1999. Rutebarika, C., Winyi-Kaboyo, R., Barrat, J., and King, A. A. 1999. Lyon, Editions Fondation Mérieux.
13. Proceedings of the 6th Southern and East African Rabies Group/World Health Organization meeting, Lilongwe, Malawi, 18-22 June 2001. Barrat, J. 2001. Lyon, Editions Fondation Mérieux.
14. Rabies Control in Asia. Proceedings of the Fourth International Symposium on Rabies Control in Asia, Hanoi, Vietnam, 5-9 March 2001. Mountrouge: John Libbey Eurotext, 2001.
15. Association for the Prevention and Control of Rabies in India. Assessing the burden of rabies in India: a national multicentric survey. Progress Report. 2003.
16. Dutta JK. Safety and tolerance of purified Vero rabies vaccine (Verorab): an Indian experience. *Journal of the Association for Prevention and Control of Rabies in India* 1999;1:26-30.
17. Pancharoen C, Thisyakorn U, Lawtongkum W, Wilde H. Rabies exposures in Thai children. *Wilderness & Environmental Medicine* 2001;12:239-43.
18. Fishbein DB. Rabies in humans. In: Baer GM. *The Natural History of Rabies*, 2nd ed. Boca Raton: CRC Press, Inc., 1991:519-49.
19. Babès V. *Traité de la rage (Treatise on Rabies)*. Paris: Baillièere et Fils, 1912.

20. Baltazard M, Ghodssi M. Prevention of human rabies: treatment of persons bitten by rabid wolves in Iran. *Bulletin of the World Health Organization* 1954;10:797-802.
21. Shah U, Jaswal GS. Victims of a rabid wolf in India: effect of severity and location of bites on development of rabies. *Journal of Infectious Diseases* 1976;134:25-9.
22. Vose D. Risk analysis: a quantitative guide, 2nd ed. New York: John Wiley & Sons, Ltd, 2000.
23. World Health Organization. World Survey of Rabies No. 32 for the year 1996. Unpublished document WHO/Rabies/92.203. Geneva: World Health Organization, 1998.
24. World Health Organization. World Survey of Rabies No. 34 for the year 1998. Unpublished document WHO/CSR/APH/99.6. Geneva: World Health Organization, 1999.
25. World Health Organization. World Survey of Rabies No. 35 for the year 1999. Unpublished document WHO/CDS/CSR/EPH/2002.10. Geneva: World Health Organization, 2002.
26. Proceedings of the 4th Southern and East African Rabies Group, Nairobi, Kenya, 4-6 March 1997. Kitala, P., Perry, B., Barrat, J., and King, A. A. 1997. Lyon, Editions Fondation Mérieux.
27. World Health Organization. World Survey of Rabies No. 33 for the year 1997. Unpublished document WHO/CSR/APH/99.4. Geneva: World Health Organization, 1999.
28. Bahri F, Letaief A, Ernez M, Elouni J, Chekir T, Ben Ammou S et al. Neurological complications in adults following rabies vaccine prepared from animal brains. *Presse Medicale* 1996;25:491-3.

29. Held JR, Adaros HL. Neurological disease in man following administration of suckling mouse brain antirabies vaccine. *Bulletin of the World Health Organization* 1972;46:321-7.
30. Swaddiwuthipong W, Weniger BG, Wattanasri S, Warrell MJ. A high rate of neurological complications following Semple anti-rabies vaccine. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 1988;82:472-5.
31. Meltzer MI, Rupprecht CE. A review of the economics of the prevention and control of rabies part 1: Global impact and rabies in humans. *Pharmacoeconomics* 1998;14:365-83.
32. Madhusudana SN, Desai A, Satishchandra P, Christopher R, Swamy HS. Auto-antibodies to neural antigens in patients with neurological complications due to Semple vaccine. *Journal of the Association for Prevention and Control of Rabies in India* 2002;4:31-7.
33. Shankar SK, Madhusudana SN, Satyanarayana Swamy H. Pathological morbidity following Semple type antirabies vaccine in India and why we need to replace it? *Journal of the Association for Prevention and Control of Rabies in India* 2000;1:10-7.
34. Murray CJL, Lopez AD. Global health statistics: a compendium of incidence, prevalence, and mortality estimates for over 200 conditions, vol. 2. Harvard: Harvard School of Public Health, 1996.
35. Hemachudha T, Phanuphak P, Johnson RT, Griffin DE, Ratanavongsiri J, Siriprasomsup W. Neurologic complications of Semple-type rabies vaccine: clinical and immunologic studies. *Neurology* 1987;37:550-6.
36. Greenwood M. Tenth report on data of anti-rabies treatments supplied by Pasteur Institutes. *Bulletin of the World Health Organization* 1945;12:30.
37. Seneviratne U. Guillain-Barre syndrome. *Postgraduate Medical Journal* 2000;76:774.

38. Mathers, C. D., Vos, T., Lopez, A. D., Salomon, J., and Ezatti, M. National burden of disease studies: a practical guide. Edition 2.0. Global Program on Evidence for Health Policy. 2001. Geneva, World Health Organization.
39. Pradhan S, Satapathy DM, Das BC. Pharmacoeconomics of antirabies vaccine treatment - the case for intradermal administration of cell culture vaccines. *Indian Journal of Internal Medicine* 2001;11:5, supplement no.1-12.
40. Godlonton, J. Traditional and cultural factors influencing post-exposure treatment. Barrat, J. Proceedings of the 6th Southern and East African Rabies Group//World Health Organization meeting, Lilongwe, Malawi, 18th - 22 June 2001, 196-198. 2001. Lyon, Editions Fondation Mérieux. 2001.
41. World Bank Group. online database. <http://devdata.worldbank.org/data-query/> Accessed on 27/07/2003 . 2003.
42. Miranda, M. E. and Miranda, N. L. J. City canine rabies elimination campaign: manpower and program costs. *Epidémiologie et santé animales* 8th International Symposium on Veterinary Epidemiology and Economics, 31-33. 1997.
43. Edelstein RM. Epidemiology and control of rabies in Malawi. *Tropical Animal Health Production* 1995;27:155-63.
44. Food and Agricultural Organization of the United Nations. FAOSTAT online database. <http://apps.fao.org/page/collections> Accessed on 14/07/2003 . 2003.
45. Mutemwa, A. Rabies in Zambia. Kitala, P., Perry, B., Barrat, J., and King, A. A. Proceedings of the Fourth International Conference of the Southern and East African Rabies Group, Nairobi, Kenya, 4-6 March. 1997. Lyon, Editions Fondation Mérieux. 6-3-1997.