

Introduction: Animal experimentation is common in Africa, a region that accords little priority on animal protection in comparison to economic and social development. The current study aimed at investigating the prevalence of animal experimentation in Kenya, and to review shortfalls in policy, legislation, implementation and enforcement that result in inadequate animal care in Kenya and other African nations. **Methods:** Data was collected using questionnaires, administered at 39 highly ranked academic and research institutions aiming to identify those that used animals, their sources of animals, and application of the three Rs. Perceived challenges to the use of non-animal alternatives and common methods of euthanasia were also queried. Data was analyzed using Epidata, SPSS 16.0 and Microsoft Excel. **Results:** Thirty-eight (97.4%) of thirty-nine institutions reported using animals for education and/or research. Thirty (76.9%) institutions reported using analgesics or anesthetics on a regular basis. Thirteen (33.3%) institutions regularly used statistical methods to minimize the use of animals. Overall, sixteen (41.0%) institutions explored the use of alternatives to animals such as cell cultures and computer simulation techniques, with one (2.6%) academic institution having completely replaced animals with computer modeling, manikins and visual illustrations. The commonest form of euthanasia employed was chloroform administration, reportedly in fourteen (29.8%) of 47 total methods (some institutions used more than one method). Twenty-eight (71.8%) institutions had no designated ethics committee to review or monitor protocols using animals. **Conclusion:** Animals are commonly used in academic and research institutions in Kenya. The relative lack of ethical guidance and oversight regarding the use of animals in research and education presents significant concerns.