[DOH ADMINISTRATIVE ORDER NO. 164, s. 2002, October 16, 2002]

REVISED GUIDELINES ON MANAGEMENT OF ANIMAL BITE PATIENTS

I. Rationale

The National Objectives for Health 1999-2004 states that rabies is a public health problem in the Philippines. Approximately 300 to 600 Filipinos die of rabies every year. Indeed, rabies is a fatal disease particularly in developing countries where animal immunization and dog control measures are inadequate. In view of the 100% case fatality of human rabies, the prevention of rabies infection after exposure is of utmost importance. With the aim of eliminating rabies and declaring the Philippines rabies-free in 2020, the Department of Health in collaboration with other agencies has committed itself to the prevention of human deaths due to rabies. In support of this, the DOH, through its rabies prevention and control program, shall provide vaccines for post exposure treatment through the Animal Bite Treatment Centers to high risk exposed patients.

II. Coverage

To ensure uniformity in the management of animal bite patients, government doctors at all levels as well as private practitioners in the country are hereby advised to follow these guidelines.

III. General Policies

A. The new anti-rabies management policy as prescribed herein and its implementation shall be subject to continuing review and evaluation by technical experts;

B. Advocacy, training of health workers have to be conducted, systems need to be in place and funding requirements need to be secured prior to the full implementation of this policy; and

C. Support from and collaboration among government, non-government and private organizations shall be a necessary requisite for its successful implementation.

IV. Program Policies

A. Management of Potential Rabies Exposure

1. There are three (3) categories of exposure to rabid animal or to animal suspected to be rabid. Each of the three categories has a corresponding management of potential rabies exposure. (Annex A*)

B. Immunization

1. Active Immunization

a) Vaccine is administered to induce antibody and T-cell production in order to neutralize the rabies virus in the body. It induces an active immune response (in 7-10 days after vaccination) and may persist for one year or more.

b) The types of anti-rabies vaccine available in the Philippines: (a) Purified Free Cell Rabies Vaccine (PVRV) — 0.5 ml/vial; (b) Purified Duck Embryo Vaccine (PDEV) — 1.0 ml/vial; and (c) Purified Chick Embryo Cell Vaccine (PCECV) — 1.0 ml/vial.

c) All vaccines are considered to be highly immunogenic and safe. For active immunization, any of the three vaccines may be administered either intra-muscularly or intradermally.

2. Passive Immunization

a) Rabies Immunoglobulin (RIG) is given in combination with anti-rabies vaccine to provide immediate protection to patients with Category III exposure. RIG has a half-life of approximately 21 days.

b) Only rabies vaccines and RIG that have been evaluated and recognized by WHO and approved by BFAD should be used. National health authorities should evaluate any new vaccine or RIG prior to use.

c) RIG is of two types:

• Human Rabies Immunoglobulin (HRIG) derived from plasma of human donors administered at 20 IU per kilogram body weight; and

• Equine Rabies Immunoglobulin (ERIG) derived from horse serum administered at 40 IU per kilogram body weight;

c) Computation of RIG dosage

- HRIG at 20 IU/Kg. Body weight (150 IU/ML)

$$\text{50 kg. Patient} \times \frac{20 \text{ iu/kg}}{150 \text{ iu/ml.}}$$
$$= 50 \text{ kg} \times .0133$$
$$= 6.7 \text{ ml.}$$

- ERIG at 40 IU/kg. Body weight (200 iu/ml)

$$\text{50 kg patient} \times \frac{40 \text{ iu/kg}}{200 \text{ iu/ml.}}$$
$$= 50 \text{ kg.} \times 0.20$$
$$= 10 \text{ ml.}$$

d) Rabies immunoglobulin (RIG) should be given as a single dose for all Category III exposures e) RIG should be infiltrated around and into the wound as much as automatically feasible, even if the lesion has begun to heal. Any remaining RIG should be administered intramuscularly at the site distant from the site of vaccine injection.

f) The RIG should not exceed the calculated dose as it may reduce the efficacy of the vaccine. If the calculated dose of RIG is sufficient to infiltrate bite wounds, it may be diluted with sterile saline 2 or 3 fold for thorough infiltration.

g) RIG should be administered at the same time as the first dose of vaccine. However, if RIG is unavailable when the first dose of vaccine is injected, it may be given until 7 days after the first dose of the vaccine. This assumes that the patient received the day 3 and 7 doses.

h) A skin test must be performed prior to ERIG administration. Hypersensitivity to ERIG may not be predicted by skin test. Always be ready with adrenaline and antihistamines for treatment of hypersensitivity. A positive interpretation is based on an induration of 6 mm or more.

C. Treatment

1. Post-Exposure Treatment

a. Local Wound Treatment

a.1 Wounds should be immediately and vigorously washed and flushed with soap and water preferably for 10 minutes.

a.2 Apply alcohol, tincture of iodine or any antiseptic.

a.3 If possible, suturing of wounds should be avoided, however, if suturing is necessary, anti-rabies immunoglobulin should be infiltrated around and into the wound before suturing.

a.4 Do not apply any ointment, cream or occlusive dressing to the bite site.

a.5 Anti-tetanus immunization and anti-microbial may be given, if indicated. Animal bites are considered tetanus prone wounds (Annex B*).

b. Treatment Regimen

b.1 2-Site Intradermal Schedule (2-2-2-0-1-1)

• One dose for intradermal administration is equivalent to 0.1 ml. For PVRV and 0.2 ml for PDEV/PCECV.

• One dose should be given at two sites on Days 0, 3 and 7 and at one site on Days 30 and 90 (Annex C1*)

• Injections should be given on the deltoid area of each upper arm in adults, or in infants, at the anterolateral aspect of the thigh.

• The schedule should be strictly followed as it may cause treatment failure. In certain instances when patient fails to come on the scheduled date for his succeeding dose, the following rules should be followed:

> If only 1 dose (day 0) has been given and the time lapse between the 1st (day 0) and 2nd (day 3) doses is more than one week, repeat the first dose. RIG should not be repeated.
> If at least 2 doses (day 0 and 3) have been given, missed doses may be adjusted but the remaining doses should be given according to the original schedule.
> If day 30 dose is missed, it may still be given when the patient comes. The succeeding dose (day 90) may be given as originally scheduled or at least 1 month after the day 30 dose, whichever is longer.
> If day 90 is missed, it may be given when the patient comes.

• A one (1) ml. insulin syringe with gauge 25 or 26 needle should be used for intradermal injection.

• Vaccine should be stored within 4 0C and 8 0C and after reconstitution should be used within 8 hours.

b.2 2-1-1 Intramuscular Schedule

• Using 2-1-1 regimen, one dose is equivalent to 1 vial of 0.5 ml. of PVRV or 1.0 ml. of PDEV/PCECV. Two (2) doses are given intramuscularly (1M) on Day 0. One dose is given in the deltoid area of each upper arm, or in infants, at the anterolateral aspect of the thigh on Day 7 and on Day 21 (Annex C2*)

• Treatment schedule should be strictly followed to prevent treatment failure. In certain instances when a patient fails to come on the scheduled date for his succeeding dose, the patient need not restart treatment. The prescribed interval between the day he receives the injection and the date of his succeeding injections will be followed.

• The 2-1-1 regimen induces an early antibody response. However, it should be used in combination with rabies immunoglobulin for Category III exposure.

• If dog is alive and healthy after the 14-day observation period, discontinue the last dose.

• The 2-1-1 IM regimen should be considered when RIG is not available. The patient must be informed that this is not the optimum regimen for Category III exposures.

b.3 Standard Intramuscular Schedule

• Using the standard IM regimen, one dose is equivalent to 1 vial of 0.5 ml of PVRV or 1.0 ml of PDEV/PCECV. One (1) dose is given intramuscularly (IM) on days 0, 3, 7, 14 and 28 (Annex C3*)