

South Australian Homing Pigeon Association

Pigeon Paramyxovirus Advice and Control

February 2016

Introduction

This Paper has been prepared due to the arrival of PMV1 (Pigeon Paramyxovirus I) into South Australia in January 2016 from birds that were brought from interstate. The virus was first recognised in Australia, in Victoria in 2011. This virus is a close relative of Newcastle disease (Avian paramyxovirus) which is rapidly fatal in chickens. Australia is currently free of the virulent form of Newcastle disease.

About the disease

PMV1 at this stage only infects bird of the genus "Columbia", fundamentally Domestic Pigeons but has also been seen in spotted turtle doves during the outbreak in Victoria.

In unvaccinated pigeons, death rates of 80 to 90% is the norm. Birds may be lethargic, fluffed-up with increased amount of water in droppings and slow-emptying crops. They may show neurological (brain) signs such as head tilt and weakness on their feet.

A milder version of the disease can occur in pigeons that have started but not yet completed their full vaccination course (two vaccinations 2-4 weeks apart), but also occasionally in older birds if annual booster vaccinations are not kept up to date.

The incubation period may be as short as 3 days, but is more commonly around 14 days and as long as 28 days.

The virus survives in the environment for a long time. It is highly contagious and can be spread by contact with crop fluid, faeces or other discharges from the bird. These discharges contaminate the environment around the birds, and are readily carried on hands, clothing shoes and equipment. The virus can live in droppings for 60 days.

Paramyxoviruses can cause a mild illness in humans. This typically presents as conjunctivitis and mild influenza like symptoms (headache, fever). If pigeon owners/handlers are feeling unwell they should contact their General Practitioner. They can also ring the Department of Health's Communicable Disease Control Branch on 1300-232-272 if they have any concerns. It is advisable to take appropriate precautions, including personal protective equipment (PPE) when working with birds suspected to be affected by PMV1. This includes wearing long-sleeved clothing (shirt and long pants), closed footwear, gloves, mask and goggles/safety glasses.

Legislation

PPMV1 is a notifiable disease in South Australia

Instead of insisting on destruction of all affected birds, the government has described the disease as one that is endemic in pigeons in Australia and can be controlled by vaccination.

Pigeon paramyxovirus is a notifiable disease in all states of Australia.

Suspicion or confirmation of disease **MUST** be reported to the
Animal Disease Hotline on 1800 675 888.

Biosecurity SA is the government department responsible for identification of new cases and listing new notifiable events. The virus remains notifiable as two concerns are of interest:

1. The movement of the disease as it spreads to new areas
2. The possibility of the virus mutating and then infecting other bird species

Pigeon lofts with pigeon paramyxovirus will not be put under quarantine by Biosecurity SA.

Privacy

Privacy legislation prevents the disclosure of infected properties to the general public. Government departments and veterinarians are bound by this legislation of non-disclosure. The government department in its notification will only identify the infected property by town/region.

Vaccination

The only vaccine registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA) for use in pigeons is *POULVAC NEWCASTLE IK VACCINE (INACTIVATED)*,
Product number: 59138.

The vaccination regime is two doses with a 28 day interval of 0.5ml administered under the skin (subcutaneously) using an aseptic technique. The vaccine must be kept cool at all times (NOT frozen) at 4°C including during transport (please see attached product label).

Correctly vaccinated properties are at minimal risk and losses will be significantly reduced. Unvaccinated properties are at very high risk and mortality will be in the 80 to 90% of the colony.

Vaccinated flocks are vulnerable to infection at various times throughout their life.

1. The younger stock is considerably vulnerable from weaning until 14 days after the 2nd Vaccination.
2. Toward the end of a twelve month period following the initial vaccination. (at 10 to 11 months, immunity becomes reduced, hence the requirement for a booster vaccination)
3. Vaccination of the breeding birds could well be of assistance if applied within two months before mating. This protects young chicks from exposure to disease and is protective until the vaccination can be completed.
4. Vaccination at or before weaning is preferable.
5. In an outbreak, any unvaccinated bird is susceptible and may increase the amount of virus shed when it acquires the infection. So every bird, including chicks should be vaccinated to reduce the amount of virus spread on the property if an outbreak is identified.

Diagnosis of PPMV1

PMV1 should be suspected if birds with the following are seen:

1. sudden unexplained deaths,
2. excess liquidity of the droppings, green droppings,
3. neurological distress, lethargic,
4. weight loss in a very short period of time.

At this point, a diagnosis is sought through Biosecurity SA. Contact the **Animal Disease Hotline on 1800 675 888**. A live bird is submitted to PIRSA's VetLab through a veterinary clinic. Information that should accompany the submission includes any movement of birds onto the property in the three weeks prior to the bird being observed to be unwell. Results take up to 48 hours to confirm and while this occurs, the flock should not be flown and no movement of birds should occur. The laboratory will test to determine if PPMV1 is present and may also exclude avian influenza and Newcastle disease.

Management of Infected Property

It is in the interests of all pigeon racers and fanciers to control the spread of this disease as it moves through South Australia. Years of bloodlines may be lost, as may fancy breeds held in small numbers. The critical point is to vaccinate ALL birds now so that their immunity is boosted as the disease moves into a loft. However, all owners of pigeons need to appreciate that it will take at least 6 weeks for birds to become immune – i.e. the bird is not protected until 2 weeks after the second vaccination given one month after the first. The only way to help these birds is to look to confirm the disease early and then, when it is identified on the property, for a property isolation (lockdown) to occur. At the end of the day, this is voluntary. But continuing to move infected birds through racing or showing will maintain the spread of disease and damage the pigeon industry.

How to manage PPMV1 on your property

It is advised to obtain veterinary advice and to provide supportive treatment.

There is no specific treatment for PMV1. Infected pigeons often die within 72 hours, but may survive with supportive therapy e.g. electrolytes and probiotics. Concurrent control and treatment of other diseases and parasites is also advisable.

1. While waiting for a confirmation of the disease, the birds should not be flown and no bird should enter or leave the property.
2. Always enter affected (sick) lofts last when caring for birds, so that you are not spreading disease from sick lofts to healthy ones.
3. Make sure you maintain strict biosecurity between healthy birds/cages/lofts, and infected birds/cages/lofts.
4. As soon as confirmation of disease occurs, it is advised to vaccinate all birds immediately (if they are not already adequately vaccinated) and seek expert veterinary advice.
5. Pigeon Facility Cleaning and Sanitising:
 - a. Place birds in holding cages while cleaning is carried out.
 - b. **Dry clean** using personal protective equipment (see above : *Paramyxoviruses can cause a mild illness in humans*). Scrape and sweep up and remove **all** organic matter from the facility. Ensure that all organic matter is collected into sealed containers/tough bags for safe disposal.
 - c. **Wet clean**. Requires application of a suitable detergent (preferably capable of also killing viruses) which will penetrate all the soils (especially faeces and urates) and keep soils in suspension and be free rinsing. Ideal application is the use of a handheld foaming unit attached to a garden hose. Apply chemical at correct rate to all surfaces – walls, floors, ceilings, perches and all other equipment.
 - d. **Rinse** (hose/mop up/wipe) all surfaces. All surfaces need to be visually clean after this step.
 - e. **Sanitise**. Apply a sanitizer to all surfaces at the correct dilution rate (ensure that it is compatible with the detergent). Use a sanitizer which is active in the presence of organic matter, preferably has a residual effect and is safe for use in bird contact areas. Read the label before use, and ensure product is in contact with surfaces to be sanitised for an appropriate length of time.
 - f. **Dry**. Ensure all surfaces are dried before birds are replaced.
6. Disposal of dead birds and infected material

- a. Options to dispose of birds include burial, incineration (burning) or professional composting.
- b. For small numbers of birds, burial on the property may be considered. Bury infected material/manure as well as birds. Ensure that the burial pit is covered at all times.
- c. For larger numbers of birds and infected materials, professional composting companies should be used. Birds and infected materials should be stored in impervious containers until they can be safely dispatched to the composting company.
- d. Incineration can be arranged at your local vet, Animal Welfare League or waste company.

7. Property Isolation

- a. At the first signs of symptoms, (e.g. lethargy, liquid droppings, weight loss, neurological signs, sudden multiple deaths in short period of time, i.e. 24 hours) the property should apply a Voluntary Lockdown.
- b. Voluntary Lockdown includes measures to keep the disease contained to the property and not allow spread. This means that:
 - i. No birds should enter or leave the infected property.
 - ii. All birds should be Locked Down until all symptoms of the disease have stopped, and the property has been cleaned and decontaminated
 - iii. Late birds returning should be isolated and not reintroduced to the colony
 - iv. No related material (droppings, baskets, feed, or any other pigeon related material) should enter or leave the property
 - v. Only people essential to the management of the pigeons should enter the lofts
 - vi. Only enter lofts with clean, disinfected footwear (a footbath can be used, but this must be refreshed regularly) and clean hands
 - vii. Separate equipment should be used for infected lofts –these should not be used in other lofts.
 - viii. No pets/other animals should enter the lofts
 - ix. All vehicles leaving the property should be cleaned of organic material and disinfected to ensure no virus is transported off the property
 - x. People leaving the property should disinfect their footwear and hands, as well as wear clothes that have had no contact with birds
 - xi. People from an infected property should avoid contact with all other bird species
 - xii. Good hygiene should be observed by the pigeon owner if attending pigeon related social functions or gatherings

- c. The voluntary Lockdown should remain in place for a period of 30 days following the last PMV1 death.
- d. The Association will engage an Avian Vet to assist in the lifting of the Voluntary Lockdown.

Prepared for comment and discussion by: - Stephen C Nuske for and on behalf of the SAHPA.

Avian Veterinarians.

South Australia

Adelaide Bird & Exotic Vet Clinic, 129 Richmond Road, Richmond SA

Phone 08 84438438

Emai:- info@abevc.com.au

Victoria

Melbourne Vet Clinic

1 George St, Scoresby, Vic, 3179

Phone 03 97649000

Fax 03 97649000

Email:- vet@melbournebirdvet.com

New South Wales

Carlington Animal Hospital

Phone 02 98716036

Fax 02 98732175

Email:- robmarshall@birdhealth.com.au