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**PRESS RELEASE**

**Leptospirosis is Still a Serious Threat in American Samoa**

Leptospirosis is still a serious threat to human health in the territory of American Samoa. Despite ongoing efforts by American Samoan Government Agencies to reduce the threat of the disease, recently released research from the University of Queensland shows American Samoa still must be vigilant in its battle against leptospirosis.

Dr. Colleen Lau, from the University of Queensland, School of Population Health, in Brisbane, Australia, recently visited American Samoa to present results from a survey of leptospirosis infection rates amongst the American Samoan Population. Leptospirosis is a potentially deadly disease found on American Samoa that can have symptoms similar to dengue fever, i.e. fever and chills, headache, jaundice, nausea and vomiting. Some people can develop more serious illness like liver failure, kidney failure, and brain infections, and deaths can also occur. After the period of illness (which can be mild in some people), the immune system creates antibodies to fight the disease. These antibodies are detectable in the blood for up to three years.

Examples of the danger of Leptospirosis are outbreaks in January in New Caledonia resulting in 2 deaths and 15 severe cases, and currently in Fiji, where there have been 10 deaths and 28 severe cases. Both of these outbreaks were caused by flooding after a cyclone.

In May of 2010, Dr. Lau and her team took blood samples from 807 people in 55 villages across American Samoa and tested the samples for antibodies to leptospirosis. Her results showed that 15.5% of the overall population in American Samoa had leptospirosis antibodies, indicating they had been infected with the leptospirosis disease in the past 3 years.

Dr Lau found that Tutuila had the highest sero-prevalence rate at 16.2%, followed by Ta'u (13.3%), Ofu (9.1%) and Olosega (7.1%). Other findings were:

- More males had antibodies to leptospirosis than females.
- People who either work outdoors or as fish cleaners were three times more likely to have been infected in the past 3 years compared to indoor workers.
- Unemployed people were also more likely to have contracted the disease in the past 3 years.

- People who had heard of leptospirosis before were less likely to have been exposed.
- Other factors that increased the chance of exposure to leptospirosis were fishing and swimming in streams or at the beach.

A significant finding of Dr. Lau's research was that people who lived close to, and down hill from piggeries, were more likely to have been infected in the past 3 years. AS-EPA director Fanuatele Dr. Toafa Fanuatele commented that "He is grateful of the study conducted by Dr. Colleen Lau and her team. The study supports AS-EPA's piggery enforcement efforts and overall mandate to protect public health and the environment."

Sources of leptospirosis are usually mammals, and the major suspected carriers in American Samoa are pigs and rats. The bacteria live in the kidneys of these animals and are passed into the environment through their urine. The bacteria can survive in the environment for several weeks and can be washed into streams and onto beaches during rain, and there is an especially high risk after flooding.. Leptospirosis can enter the body either through cuts and scrapes, through the mucous membranes (eyes and nose) or through water soaked skin (i.e. if it is wrinkly because of water).

Recommendations from Dr. Lau and her research team to protect you and your family from infection by Leptospirosis are:

- Use personal protection (e.g., gloves and boots) during high risk activities such as when working outdoors, cleaning fish or working with animals.
- Avoid swimming in polluted streams and beaches.
- Avoid water flooding after rain and especially after cyclones.
- Keep your property clean to deter rats as they are a major carrier.
- Keep streams and beaches clean – flooding caused by trash blocking streams increases the chance of flooding.
- Reduce litter and trash because they attract rats, and cause flooding by blocking drains and streams.
- Control your dogs as they often disturb trash cans which can attract rats.

Dr. Lau praised AS-EPA's piggery program and said "the findings from our study support the work being done by the AS-EPA's Piggeries Compliance Program over the past few years. It is very important to make sure that piggeries are well managed, and that piggery waste is not washed into streams, gardens, or homes. AS-EPA's approved piggeries are specifically designed to reduce environmental contamination by piggery waste. Leptospirosis warning signs around the islands are also useful for improving public awareness about the disease, and people should avoid swimming in places that AS-EPA has identified as high risk".

Dr Saipale Fuimaono, of the American Samoan DOH said "One of the important recommendations from the study is to increase public awareness and education within the communities of what Leptospirosis is, what causes it and where does one get exposed to the bacteria, what the symptoms are, how it is spread, who is at risk, how it can be prevented and how it is diagnosed. Families are encouraged to have pets immunized and

keep a very clean and sanitary way of living to prevent rodent infestations. The AS-EPA are identifying spots where potential hazards may be. Addressing the importance of human behaviour and environmental exposure will reduce the leptospirosis disease burden with outreach activities via television, radio and informational pamphlets.”

The findings from Dr. Lau’s research were recently presented at the Australasian College of Tropical Medicine conference, and submitted to the Journal of Tropical Medicine and Hygiene.