Livestock

Enhancing the Management of Antimicrobial Resistance in Fiji

Fiji

Overview

Antimicrobial resistance is the most urgent emerging threat to human and animal health, as it drives the evolution of superbugs that do not respond to standard treatments and can't be contained.

The economic cost of antimicrobial resistance in the Western Pacific region could be as high as A$1.76 trillion over the next 10 years. Resistant micro-organisms are present in Fiji's hospitals, and the country has one of the highest rates of bacterial infections in the world at 50 cases of *Staphylococcus aureus* per 100,000 people. Fiji's high rates of diabetes-related amputations and tuberculosis (human and animal) further increase the risk of antimicrobial resistance as its population has a greater need for antimicrobial medications.

In 2015, Fiji was the first country to develop a three year National Action Plan against antimicrobial resistance, and an updated plan is now in development under the guidance of the National Antimicrobial Resistance Committee, a multisector platform endorsed by the Fiji Government.

As the same, or similar antimicrobials can be used to treat various infectious diseases in animals and humans, a One Health approach is being taken to strengthen both human and animal health systems, save costs and improve health outcomes.

KEY FACTS

ACIAR Project No. LS/2019/119
Duration: January 2020 to June 2022 (2.5 years)
Target areas: Fiji
Budget: A$2,740,747

Project Leader
Dr Walter Okelo, CSIRO Biosecurity Flagship

Key partners
- University of Technology, Sydney
- University of South Australia
- Fiji National University

ACIAR Research Program Manager
Dr Anna Okello

Objective

The project's aim is to enhance the integrated management of antimicrobial resistance through existing national structures in Fiji, to achieve sustainable and improved health outcomes.

The objectives are to:

- Develop a prototype for an integrated antimicrobial resistance and antimicrobial use surveillance system in Fiji.
- Develop lab capacity and appropriate technologies for sustainable antimicrobial resistance surveillance and detection.
- Develop risk and socio-economic evaluation frameworks to assess antimicrobial resistance.
- Recommend and influence sustainable antimicrobial resistance management policies at local, national and regional levels.

Expected scientific results

- Increased capacity for continuous research into antimicrobial resistance well beyond the end of this project.
- An understanding of antimicrobial resistance in animals, humans and the environment, including baseline antimicrobial genes presently circulating in Fiji.
- A cost benefit analysis of judicious use of antibiotics and establishment of an economic framework to evaluate the burden of antimicrobial resistance.

Expected impact/outcomes

- Increased knowledge of antimicrobial resistance and antimicrobial use in Fiji through integrated data interpretation across human, animal and environmental sectors.
- Increased skill-base in Fiji around antimicrobial resistance analysis, diagnostics, biomarkers and laboratory safety to improve the understanding of the spread and impact of antimicrobial resistance in people and animals.
- Improved policies around antimicrobial resistance and antimicrobial stewardship at local, national and regional levels.
- Increased knowledge of the role of men and women in household disease management and medication of both families and animals.
- Increased knowledge of antimicrobial resistance governance at the community level will enable better-targeted action on the prescription and use of antimicrobials that considers the local population's needs around therapeutic use for both themselves and their livestock.