

Association of State Territorial Health Officials  
2018-2019 Environmental Public Health Tracking  
Peer-to-Peer Fellowship  
FINAL REPORT

**Pilot Project:**  
Food Laboratory and Food Safety Surveillance in  
Pohnpei, FSM

**FELLOWSHIP PARTICIPANT:**

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## **BACKGROUND**

The Federated States of Micronesia (FSM) is a country spread across the Western Pacific Ocean comprising more than 600 islands. Micronesia is made up of four island states: Pohnpei, Kosrae, Chuuk, and Yap. The country is known for the palm-shaded beaches, wreck-filled dives, and ancient ruins, including Nan Madol, sunken basalt temples, and burial vaults that extend out of a lagoon on Pohnpei.

As mandated in Public Law 7-116 (National Food Safety Act), the National Government administers, enforces and operates the National Food Safety Laboratory to ensure the public's health by consuming unsafe food.

In 2014 the National Food Safety Laboratory was established on the top floor of Pohnpei Environmental Protection (EPA). Over time, its capacities have slowly increased to support the four states of the Federated States of Micronesia in performing analysis on food imports, exports, processed food for domestic uses and food establishment hygiene standards.

The purpose of the National Food Safety Laboratory is to analyze food samples to determine compliance with the National Food Safety Act and Department of Health and Social Affairs' regulations, in such ways to avoid unnecessary disruption of business operations. Because the lab is run by the National Government, EPA in Pohnpei has jurisdiction over all businesses. The lab assists the Food Safety Unit in EPA with any food sampling, preparations, and analytical needs to support investigation of complaints and possible violations of state food safety laws and regulations, including consumer complaints. The laboratory also works with other food officials at the national and local levels of the government.

## **INTRODUCTION**

Pohnpei's National Food Safety Laboratory was selected to participate in the 2018-2019 EPHT Peer-to-Peer Fellowship Program in December 2018. Even though I was new to the workforce, I am honored to be part of the fellowship program and assist leadership in pursuing new opportunities to support the goals of the food laboratory. With support from Moses Pretrick, Environmental Health & Food Safety Program Manager; and my colleagues Margaret Baekalia-Santos, Bio-Safety Officer/Microbiologist, and Shimmaysin Gonzaga, Competent Authority Team Leader, I submitted the application for the program and was began my project as a fellow.

## **MENTORSHIP**

On January 18, 2019, the Chief of the Office of Environmental Health at the Arizona Department of Health Services (ADHS), Eric Thomas indicated interest in Arizona's Environmental Public Health Tracking team serving as a mentor state for FSM's Environmental Public Health Tracking (EPHT) fellowship project. This match was finalized on February 4, 2019. An introductory call was made on March 5, 2019 with Eric Thomas, Matt Roach, Program Manager, Wesley Kortuem, GIS supervisor, Moses Pretrick, Environmental Health & Food Safety Manager, and Samantha Williams, Senior Analyst, Environmental Health.

Before the call, Arizona requested more information about the project to better understand how they could assist our team in achieving the project's objectives. Discussions during the call focused on the background of the laboratory and the capacity and resources that are available to assist the four FSM states. We also discussed plans for collaboration and possible challenges in meeting data collection goals, as well as expected outcomes and future plans for the project. During the call, Arizona asked us to provide the current laboratory forms used in our reporting and data collection process. After reviewing these materials, Arizona decided to use CDC's Epi Info Application to re-create lab forms, data entry forms, and create graphs.

Several webinars and training calls followed where the FSM team learned about geographic information systems (GIS) methods and how to use Epi Info. We learned that GIS is more of an advanced technology that the project's data collection activities will not be able to utilize but we are interested in its future applications. To familiarize myself with Epi Info, Laura Fox, Arizona's Epidemiologist, provided me with training tutorials on how to download the application and walk through the basic steps.

### **EPHT FELLOWSHIP SITE VISIT**

Initial plans for a site visit were based on the success of the reverse site visit in the previous year between Washington State EPHT staff to their fellow and her colleagues in Saipan. As such, we expected members of Arizona's team to visit the island of Pohnpei. Unfortunately, Arizona was unable to receive travel approval, so in spite of this, a site visit was arranged whereby myself and Moses would visit the Arizona's team office. This was necessary to meet the mentors and discuss our lab capacity, resources and limitations.

From August 20-22, 2019, our mentors hosted a site visit at the Arizona Department of Health Services. With support from ASTHO's Environmental Public Health Tracking Fellowship Program, Moses and I traveled to Arizona and met with members of our mentor team (Eric, Wes, Matt, and Laura), as well as Bianca Arriaga, Food Safety & Environmental Service Program Manager, Mackenzie Tewell, Food borne Disease Epidemiologist, Arizona Health Official Leadership (Cara, Jessica, Eugene, and Chris), and Arizona State Laboratory officials. Arizona led a site visit that covered several topics: food safety, food borne disease investigations, laboratory testings, lead poisoning in children, Epi Info (hands on with FSM Database; form creation, data visualization, transferring database), and GIS and other surveillance tools. Due to

limitations around data collection, the team suggested the use of CDC's Epi Info software to create current lab forms.

## **SUMMARY/OUTCOMES**

In summary, the activities of the EPHT Fellowship were a success: from the conference calls, Epi Info virtual trainings to the site visit. With FSM's current data I was successful in creating outputs such as a line listing and a graph using Epi Info 7, which will be an on-going activity due to new data that are not yet listed. Epi Info has also allowed me to work on recreating lab forms, and with that our lab now has new short term and long term goals:

- To strengthen the capacity of National Food Safety Laboratory for food and drinking surveillance.
- To link the National Food Safety Laboratory database with a public health disease surveillance system and our national electronic health record system.

With the help of EPHT Project, we have moved towards these goals in the following ways:

- Developed a sampling schedule with Pohnpei EPA.
- Increased the number of sample collections to maintain staff competency in testing procedures.
- Developed improved standards for data collection.
- Improved and automated the food lab database.
- Converted laboratory's forms electronically using Epi Info.
  - Enhanced use of graphs and charts for data analysis.
- Increase capacity for GIS mapping for food and water safety surveillance.

Some of the challenges included:

- No samples collected during the month of March-May 2019
- Difficulty in organizing a field visit with our mentor state due to travel approval.

The following outcomes were also achieved during the Fellowship project:

- ✓ Tested environmental swabs, food, and water samples were performed during Aug. 2018-July 2019. Tests for water include Colilert and Pseudomonas and swabs and food includes Aerobic Plate Count, E. coli, and Coliforms.
- ✓ Downloaded and learned how to use Epi Info 7.
- ✓ Participated in ASTHO's Climate and Health Summit in – June 2019.
- ✓ Collected and tested 225 swabs, 28 food, and 93 water samples.
- ✓ Re-created lab forms and graphs (from paper to electronic forms).

## **CONCLUSION**

For the first time, FSM's National Food Safety Laboratory in Pohnpei was selected to participate in ASTHO's Fellowship program. It was a unique opportunity to build capacity for tracking and surveillance projects; and build experience working alongside health department colleagues and ASTHO staff. The knowledge I gained during the Fellowship will guide me in building laboratory capacity. With limited data and resources, the team was guided by their CDC mentor to find a solution (Epi Info) that would convert FSM's data collection to an electronic system. I hope to continue to learn from the Arizona team about how to continue strengthening the capacity of the National Food Safety Laboratory to conduct food and drinking surveillance and it is my long-term goal to link the laboratory's database into the public health disease surveillance and national electronic health system.

**Site Visit to the Arizona Department of Health Services:**



Photo with Arizona Department of Health Tracking Staff

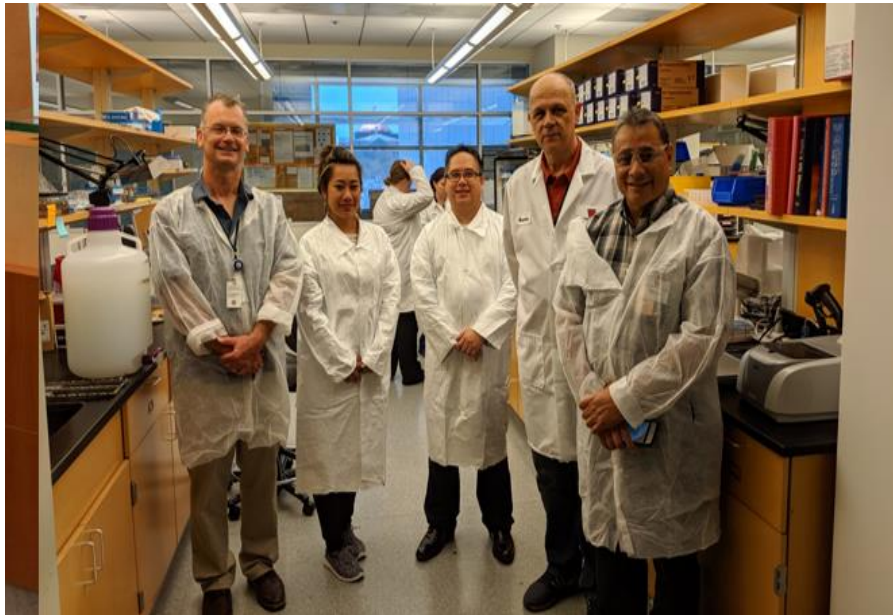


Photo with Arizona Department of Health Lab Staff