



# MALDIVES



Reviewing laboratory improvements at Indira Gandhi Memorial Hospital in Malé, Maldives.

## OVERVIEW

The Health Protection Agency (HPA) is an independent professional public health institution under the Ministry of Health. HPA was awarded a Centers for Disease Control and Prevention (CDC) five-year capacity building cooperative agreement in September 2013. The agreement aims to build and strengthen the national laboratory and influenza surveillance capacity including establishing protocols for pandemic preparedness and response and sharing information with the World Health Organization (WHO) Global Influenza Surveillance and Response System (GISRS) for global pandemic preparedness.

## SURVEILLANCE

Until recently, Maldives conducted acute respiratory infection (ARI) surveillance based on a passive syndromic system which collected data from all hospitals. The system was sensitive to the rise in ARI, but not specific to influenza, as the WHO case definition was not used, and testing for influenza viruses was not available. With the CDC award, three influenza surveillance sites were selected in Malé, and one each on two of the larger, more populated atolls. Both severe acute respiratory infection (SARI)

## HIGHLIGHTS

- Initiated SARI and ILI surveillance at IGMH.
- Initiated PCR testing at IGMH's laboratory with up-to-date protocols/procedures and sample handling.
- Updated the National Pandemic Preparedness Plan.
- Conducted Hospital Emergency Preparedness & Response training for all major hospitals up to the atoll level.
- Developed and disseminated an Event-based Surveillance Guideline for central level and SOPs for the atoll level.

and influenza-like illness (ILI) surveillance have been initiated at Indira Gandhi Memorial Hospital (IGMH). All samples will be sent to the national laboratory in Malé. Previously, communicable disease surveillance was mainly by an indicator-based surveillance using disease data from health facility notifications. To improve and formalize early warning and event-based surveillance, a guideline and standard operating procedures (SOP) for Event-Based Surveillance were prepared and disseminated.

## SURVEILLANCE ACTIVITIES

- Commenced ILI surveillance at ADK Hospital, a private hospital and a health center.
- Developed standardized data collection forms for ILI and SARI which were pretested with doctors.
- Reviewed and used the standard WHO case definitions.
- Finalized a flow chart and protocols on collecting, packaging, storing and transporting specimens.
- Compiled and disseminated weekly reports.
- Identified data sources for hospitalizations and morbidity of SARI patients which can be used in the future for estimating disease burden.

## LABORATORY

The IGMH public health laboratory tested for influenza viruses briefly during the 2009 influenza pandemic. In January 2015, trained staff began to test specimens for influenza by RT-PCR again. Staff are trained through

programs in Thailand, India and CDC Atlanta. A total of 30 samples have been tested; two were positive for an influenza virus.

### LABORATORY ACTIVITIES

- Designated laboratory staff at IGMH to attend a RT-PCR refresher training course hosted by CDC.
- Ordered necessary laboratory reagents from CDC's Influenza Reagent Resource (IRR).
- Purchased new equipment and supplies.
- Developed laboratory protocols for sample collection, storage, and transportation.

### PREPAREDNESS

The National Pandemic Preparedness Plan was prepared during the 2009 influenza pandemic. In December 2014, with outbreaks of avian influenza A (H7N9) virus and MERS-CoV circulating in some countries, the national plan was revised according to WHO guidelines. A multi-sectoral Pandemic Preparedness Committee, including the national IHR committee and other stakeholders, was established during the Ebola outbreak. The committee is formalized in the revised National Pandemic Preparedness Plan.

### PREPAREDNESS ACTIVITIES

- Established a national working group led by the Emergency Preparedness program of the HPA to develop an Atoll Hospital Emergency Response Plan (HERP).
- Trained focal points from all atoll hospitals to draft atoll-specific HERPs.
- Assigned a consultant from Thailand to prepare an event-based surveillance guideline which includes SOPs for early detection and management of outbreaks for health personnel and authorities at national, regional, and local levels.
- Developed a SOP for event-based surveillance for atoll public health units.



Scenery in the capital city of Malé, Maldives.

### TRAINING

- Trained staff at ADK Hospital on identifying, reporting and collecting samples from SARI and ILI patients (May 2015).
- Conducted a three-day workshop on influenza surveillance and trained medical and administrative staff from all health facilities in the Male' Region (March 2015).
- Trained medical staff at IGMH on identifying, reporting, and collecting samples from SARI and ILI patients (November 2014).
- Conducted a seven-day workshop on Hospital Emergency Preparedness and Response to train staff in atoll hospitals to develop hospital emergency response plans.

### INFLUENZA VACCINE ACTIVITIES

We offer influenza vaccination for all persons traveling for Hajj and Umra pilgrimages.

In the future, Maldives plans to use data generated by the surveillance system to estimate influenza disease burden. This will be used to advocate for providing influenza vaccines to high-risk groups.