

# MOROCCO



INH Assessment Meeting with EPI Focal Point and other responsible staff of the regional laboratories (16 regions) in December 2014.

## OVERVIEW

Fiscal year 2015 is the fourth year of the U.S. Centers for Disease Control and Prevention's (CDC) cooperative agreement with the National Institute of Hygiene (NIH) which hosts the National Influenza Center (NIC). Morocco's NIC has conducted virological surveillance using a network of volunteer private practitioners from eight large cities since 1996. In 2007, extension of the existing influenza surveillance network began with new sentinel sites opening across the entire country. The cooperative agreement awarded by CDC in 2011 has helped to build capacity for integrated laboratory and epidemiologic surveillance for influenza-like illness (ILI) and severe acute respiratory infections (SARI); has strengthened influenza surveillance; and has enhanced the level of preparedness and response.

## SURVEILLANCE

Morocco's MOH uses multiple surveillance systems to characterize the epidemiology of influenza, both for the observation of seasonal influenza trends, and to be prepared in the event of a pandemic. SARI is tracked through a network of eight regional hospitals where syndromic and virologic data are collected. ILI is tracked through a network of 380 health units and a network of 110 private physicians. Eight of the 380 health units collect both syndromic and virologic data.

## SURVEILLANCE ACTIVITIES

- Assessed the capacities of the sixteen regions involved in virologic and epidemiologic influenza surveillance.

## HIGHLIGHTS

- Updated the manual of integrated epidemiologic and virologic influenza surveillance and included risk factor and denominator data.
- Increased the capacity of eight regional laboratories to perform RT-PCR to detect influenza and other respiratory viruses.
- Completed the vaccine campaign by early January 2015 and 62.5% of doses were successfully administered to target populations.

- Conducted site visits and training on sentinel surveillance at the eight sites selected to conduct ILI and SARI surveillance activities.

## LABORATORY

Morocco's virologic influenza surveillance network includes one NIC and eight regional laboratories. The NIC has the capacity to conduct RT-PCR testing for influenza viruses and 15 other respiratory viruses, virus culturing, HAI testing, DFA testing, sequencing and phenotypic analysis of drug susceptibility. The eight regional laboratories are equipped with PCR machines.

## LABORATORY ACTIVITIES

- Received ILI samples from both a private physicians' network and from a health unit network; received SARI samples from SARI sites in regional hospitals.
- Tested a total of 794 specimens for influenza viruses.
- Submitted a total of 40 influenza-positive samples to a WHO CC.
- Conducted 16 supervisory visits and provided training and logistical support to laboratories in the influenza surveillance network.

## VACCINE POLICY

In 2013, Morocco started actively working towards developing a seasonal influenza vaccine policy as part of a cooperative agreement with the U.S. Centers for Disease Control and Prevention (CDC).

In November 2014, the Moroccan Ministry of Health received a donation of 123,310 doses of seasonal influenza vaccine from the Task Force for

Global Health (TFGH) through the Partnership for Influenza Vaccination Introduction (PIVI) that allowed expansion to the current target populations (health care professionals, health professions students, and pilgrims to the Hajj) to include diabetics and elderly institutionalized persons.

### VACCINE POLICY ACTIVITIES

Preparedness activities and accomplishments focused on mobilization strategies following the vaccine donation by TFGH for the 2014–2015 Influenza Vaccination Campaign:

- Developed circulars providing information regarding the availability and administration of influenza vaccine.
- Distributed circulars to target populations and agency heads at all levels (regional, provincial and individual health centers).
- Developed new pamphlets and posters that utilized more culturally relevant images geared towards health profession students.
- Utilized national media (television, radio, and social media) and print media outlets to generate awareness of the campaign and promote acceptability and availability of the vaccine among diabetic NGO members.

- Leveraged existing communication and health education infrastructure with the diabetic NGOs to promote seasonal influenza vaccine and influenza prevention annually. They also participated in World Diabetes Day by incorporating vaccine days into World Diabetes Day events and media announcements.

### TRAINING

The Department of Epidemiology at the Ministry of Health and the NIC continue to provide technical assistance and training to ensure the functioning of the sentinel surveillance system, quality of the surveillance data, prompt data analysis, and integration of the information into preparedness and response activities.

In 2015, the following trainings were organized in Morocco:

- Sentinel Surveillance for Health Workers (in the selected eight regions).
- RT-PCR for laboratories.

### Vaccine Policy

Technical assistance and training was provided to ensure the working group (WG) members responsible for the implementation of the 2014 vaccine campaign



Students waiting outside of a clinic to be vaccinated.

were familiar with qualitative study methodology, especially the focus groups (FG) approach (e.g. FG size, moderator guide, and FG composition).

- Organized one FG working group meeting.
- Organized one teleconference with CDC experts.
- Hosted a CDC expert during their visit.

This training allowed the WGs to follow successive steps for recruiting a national expert (e.g. establishment of the terms of reference, call for application, expert selection, and protocol validation).

## INFLUENZA VACCINE ACTIVITIES

Of 123,310 doses of influenza vaccine provided through TFGH donation, 46% were designated for diabetics, 31% for healthcare personnel, 20% for health students and 3% for elderly institutionalized persons.

In the 2014 vaccine campaign, a weekly follow up was conducted to assess how much vaccine was used. Of 83 provinces, 65 returned data to the central level as of March 23, 2015. These provinces indicated they received 110,092 doses and of these, 65,018 (62.5%) were successfully administered. Uptake was highest among diabetics (68.2%), followed by health professionals (54.8%). Uptake among health students varied by type of institution (5.2% for students in faculties and 60.5% for those in institutes) and uptake among elderly was extremely high (98.1%), most likely reflecting easier vaccine delivery to a residential population.

Overall, 12.3% of vaccine was redeployed to maximize use of vaccine, although these data were not consistently recorded by all provinces.



Students being vaccinated during the 2014–2015 Influenza Vaccination Campaign.