



### **MOROCCO**



### 6th Mena Influenza Stakeholders Meeting

**Organized by Fondation Mérieux** 

Prague, Czech Republic 6-7 April 2017

**Jalal NOURLIL** 

**Medical Virology and BSL-3 Laboratory** Institut Pasteur Morocco - Casablanca Zahra DAHBI

**Service of Epidemic Diseases**Directory of Epidemiology and Diseases Control - Rabat



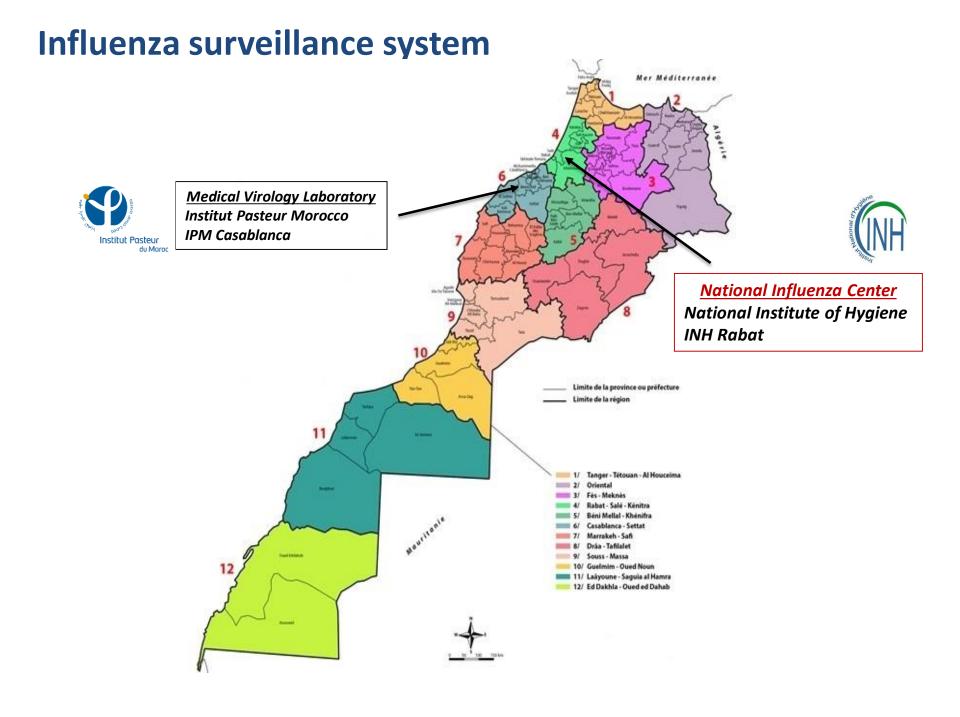
### **OBJECTIVES FOR THE UPCOMING 3 YEARS**

- \* Promotion of prevention;
- \* Improve influenza surveillance and disease burden data
- \* Increase vaccination coverage rates in pregnant women, people at risk, elderly and children
- \* Strengthening pandemic preparedness and response capacities;
- \* Operational research and publications



## **ACTION PLAN COMPONENTS UPDATE (1)**

COMPONENTS / Actions	2017 — 2018  Future actions to attain  (to be completed in September)	Challenges
SURVEILLANCE	Strengthening regional laboratory capacities for influenza diagnosis 8 Regional labs (reagents – training)  Implementation of an Event-based Surveillance for Influenza  Produce evidence on burden disease by risk group: Structuring one sentinel Hospital University site  Establishment of exhaustive SARI surveillance in hospitals (including UH) at national level  Establish a global estimates of influenza-associated mortality and hospital burden	Financial barriers  Staff Training  Communication tools





## Influenza surveillance system



### **Laboratory Network**

\* 8 Regional Laboratories / HC
Detection and identification by RT-PCR

\* NIC - Rabat

Confirmation RT-PCR, culture, sequencing, antiviral resistance

\* Pasteur Institute - Casablanca

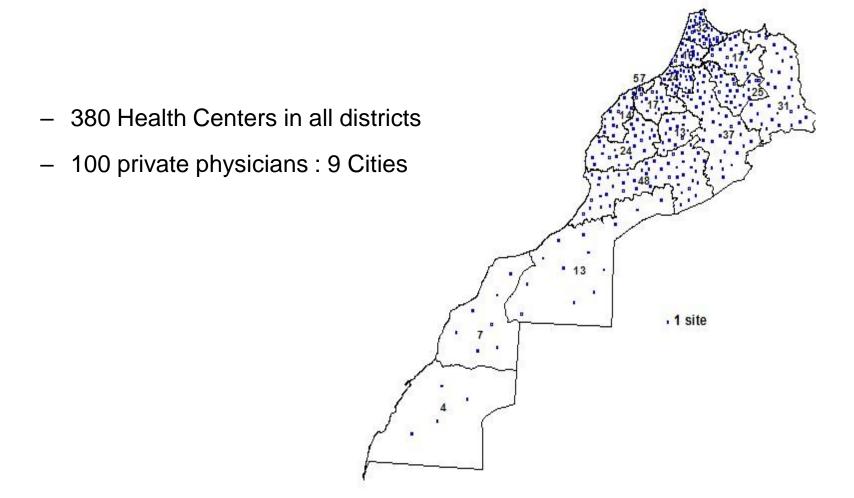
Detection & Confirmation, Cell culture Sequencing, antiviral resistance





## Influenza surveillance system

ILI Surveillance (2004)





# Influenza Virological Surveillance Casablanca

#### **Public Health Unit**



Children's Hospital

**Private physicians** 





#### **BSL-2 LAB**



Molecular Biology





**Cell Culture** 





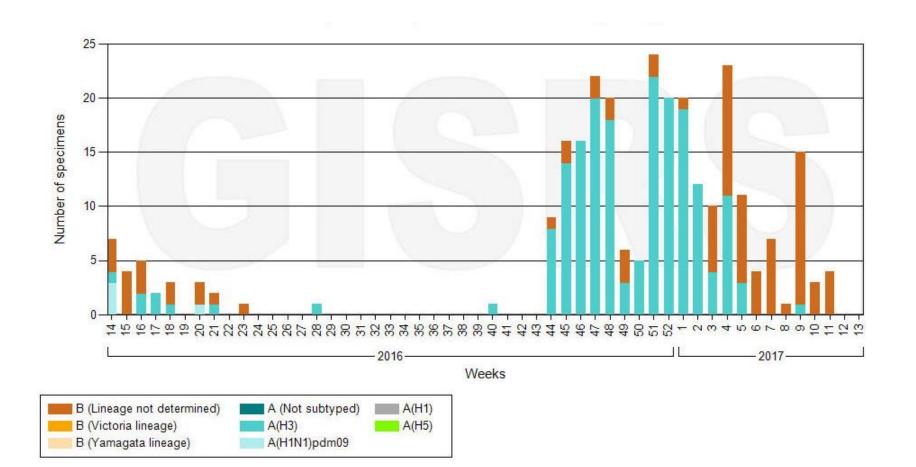
BSL-3+ LAB





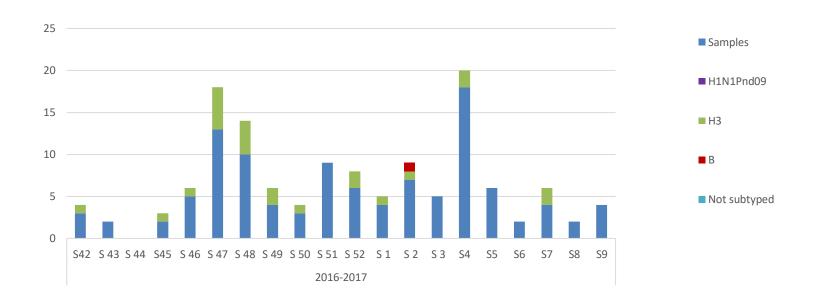


## Number of Specimens Positive for Flu by subtype INH - Rabat





## Number of Specimens Positive for Flu by subtype Institut Pasteur - Casablanca



2016 - 2017



## Screening of nasal swabs from children in Casablanca with respiratory symptoms

\* Type of samples: nasal swabs form patients with ILI

\* Collection period: 2014-2016

\* Collection location: health care units in Casablanca participating in surveillance of ILI

\* Amount of samples analyzed: 200

\* Method of analysis:

RespiFinder® 2SMART kit from PathoFinder # Pathogen specific in-house real-time PCR



16 RNA virus 2 DNA virus 4 bacteria



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## **ACTION PLAN COMPONENTS UPDATE (2)**

COMPONENTS / Actions	2017 – 2018 Future actions to attain	Challenges
VACCINATION	Produce evidence on acceptability in target groups Finish the focus group study targeting all risk groups in local area Develop KAP study for PW at national level  Consolidate the vaccination program for elderly and people with chronic diseases (diabetics) Develop a partnership plan with NGOs Elaborate a funding plan Set up of a vaccination monitoring plan  Implementation of pilot vaccination campaign for Pregnant women National Immunization Technical Advisory Groups (NITAG) meeting Develop a communication strategy Carry out cost assessment studies Develop training activities  Implementation of pilot vaccination campaign for children under 5 years  Convincing policy-makers to develop and expand national influenza vaccination policies.	Lake of national data on the seasonal flu: Burden of disease Vaccine safety Vaccine effectiveness Cost-Benefit  Coverage other risk groups  Lack of communication strategy about flu vaccine Financial barriers

#### Press release: pilot vaccination comapign for PW vaccination







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## **ACTION PLAN COMPONENTS UPDATE (3)**

COMPONENTS / Actions	2017 - 2018 Future actions to attain	Challenges
SOCIAL MOBILIZATION / EDUCATION / AWARENESS	Improving knowledge of influenza and its transmission Conduct a strong media campaign Implementing IEC activities  Promotion of behavioral change in relation to risks of infection Awareness of HCW	Spread of rumors  Lack of communication plan
ADVOCACY & POLICY	Mobilize and support intersectoral participation Identification of partners Involving NGOs and scientific societies	Resistance of stakeholders  Conflicts of Interest



### 2016-2017













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## **CONCLUSIONS / HIGHLIGHTS**

- \* Influenza is one of MoH priorities;
- \* Sentinel surveillance since 1995;
- \* Some gaps need to be improved:
  - Implementation of a burden disease assessment
  - Establish a communication startegy
  - Support for the implementation of vaccination for risk groups

