JORDAN

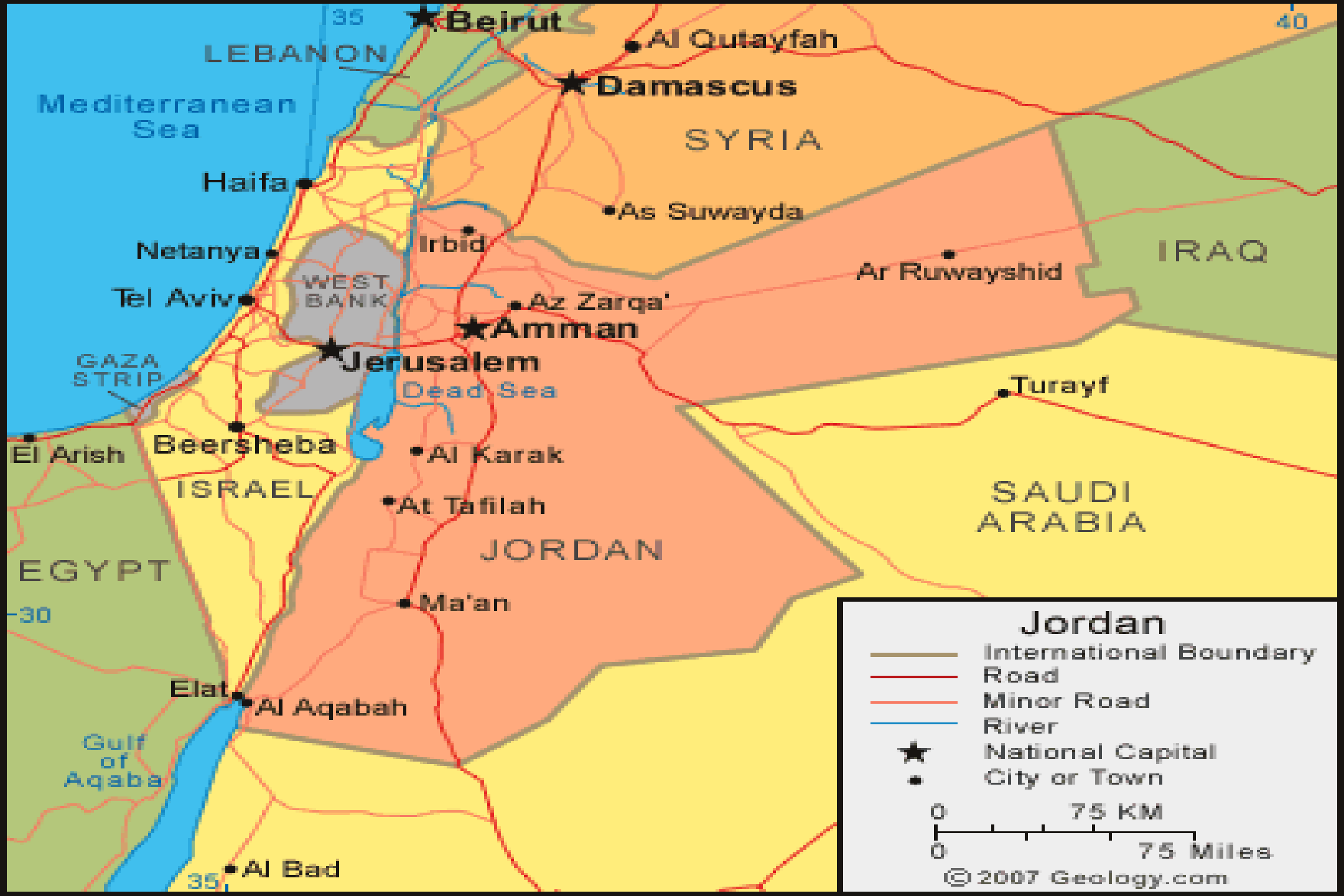
6th Mena Influenza Stakeholders Meeting

Organized by Fondation Mérieux

Prague, Czech Republic
6-7 April 2017

Dr. Mohammad Ratib Surour

Jordan


35
40
LEBANON
Beirut
Al Qutayfah
Damascus
Mediterranean Sea
SYRIA
Haifa
As Suwayda
Irbid
Netanya
IRAQ
Ar Ruwayshid
WEST BANK
Tel Aviv
Az Zarqa'
Amman
Jerusalem
GAZA STRIP
Dead Sea
Turayf
El Arish
Beersheba
Al Karak
ISRAEL
At Tafilah
SAUDI ARABIA
JORDAN
EGYPT
30
Ma'an
Elat
Al Aqabah
Gulf of Aqaba
Al Bad
35
Jordan
International Boundary
Road
Minor Road
River
National Capital
City or Town
0
75 KM
0
75 Miles
© 2007 Geology.com

Jordan Demographic profile

- *Total Population at the end of 2016* = 9531712
- Birth Rate 2.9 %
- Childbearing age women = 25%
- *Infant mortality Rate* = 17/1000
- GDP /capita 3993 $
- Total health expenditure 8.1 % of GDP

Health sectors

- Ministry of Health
- Royal Medical Services
- Private
- University hospitals.
- United Nations Relief and Working Agency for Palestine refugees (UNRWA).
- NGOs.

Jordan Objectives For Influenza

- Strengthen the Surveillance and early warning system for influenza .
- Targeted seasonal influenza vaccination program
- Improve vaccine coverage for HW / high risk groups
- Raise awareness through training , health education and communication
- Strategic stockpiling of antiviral drugs and personal protection equipment (PPE's).

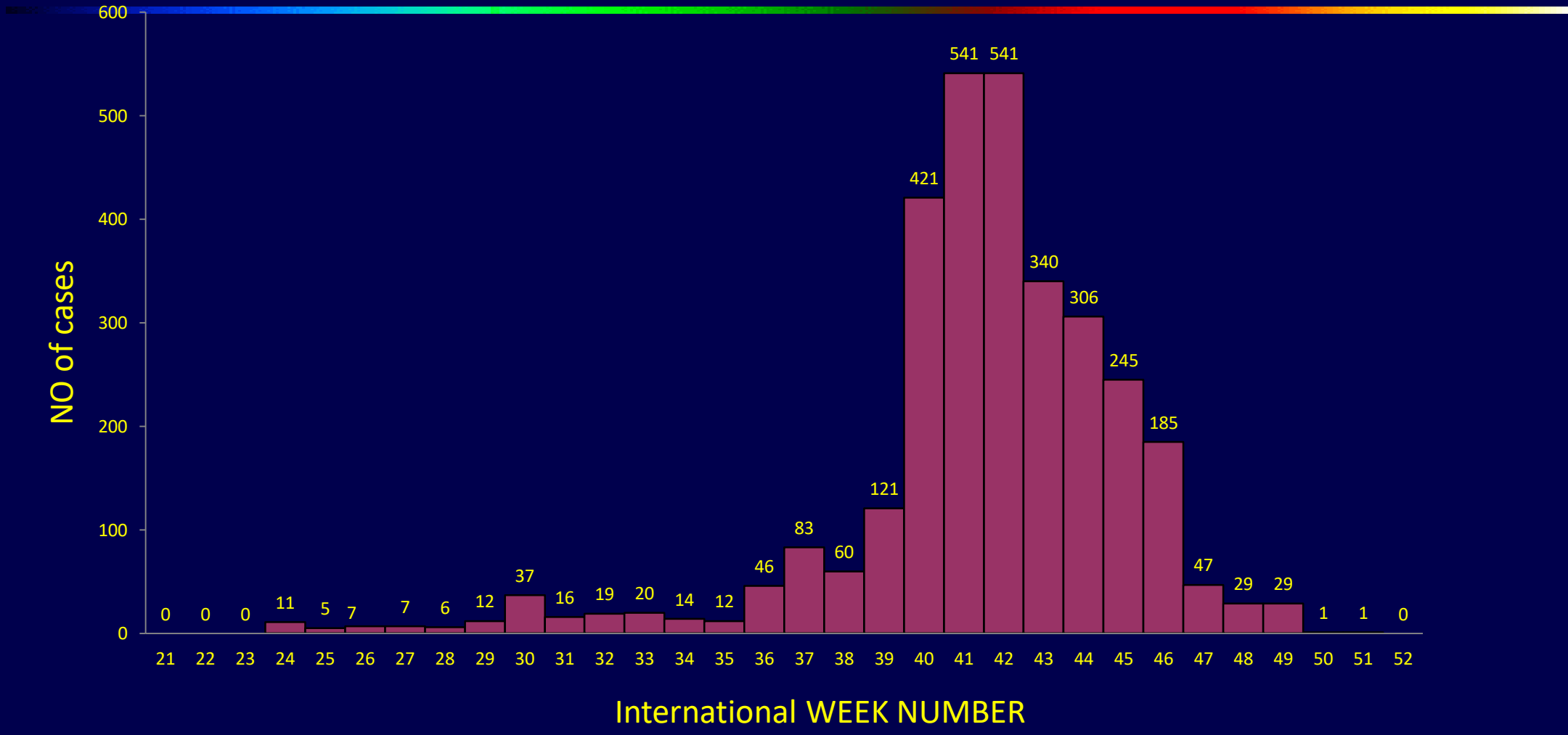
The Influenza Epidemic 2009 in Jordan & lessons learned

- 11/06/2009 WHO declared the pandemic
- First laboratory confirmed case was in 15/6/2009
- First local transmitted case was in 2/7/2009
- Jordan was the 9th Arab country to register cases
- First shipment of the vaccine was in 10/11/2009
- Last laboratory confirmed case was on 20/12/2009
- Total number of laboratory confirmed cases:3049
- Total number of reported deaths:16

Contin.. .

- 10/08/2010 WHO: Post pandemic period
- 13/12/2010 Post pandemic cases
- Up to May
- Total Number of cases=291
- Total deaths=18

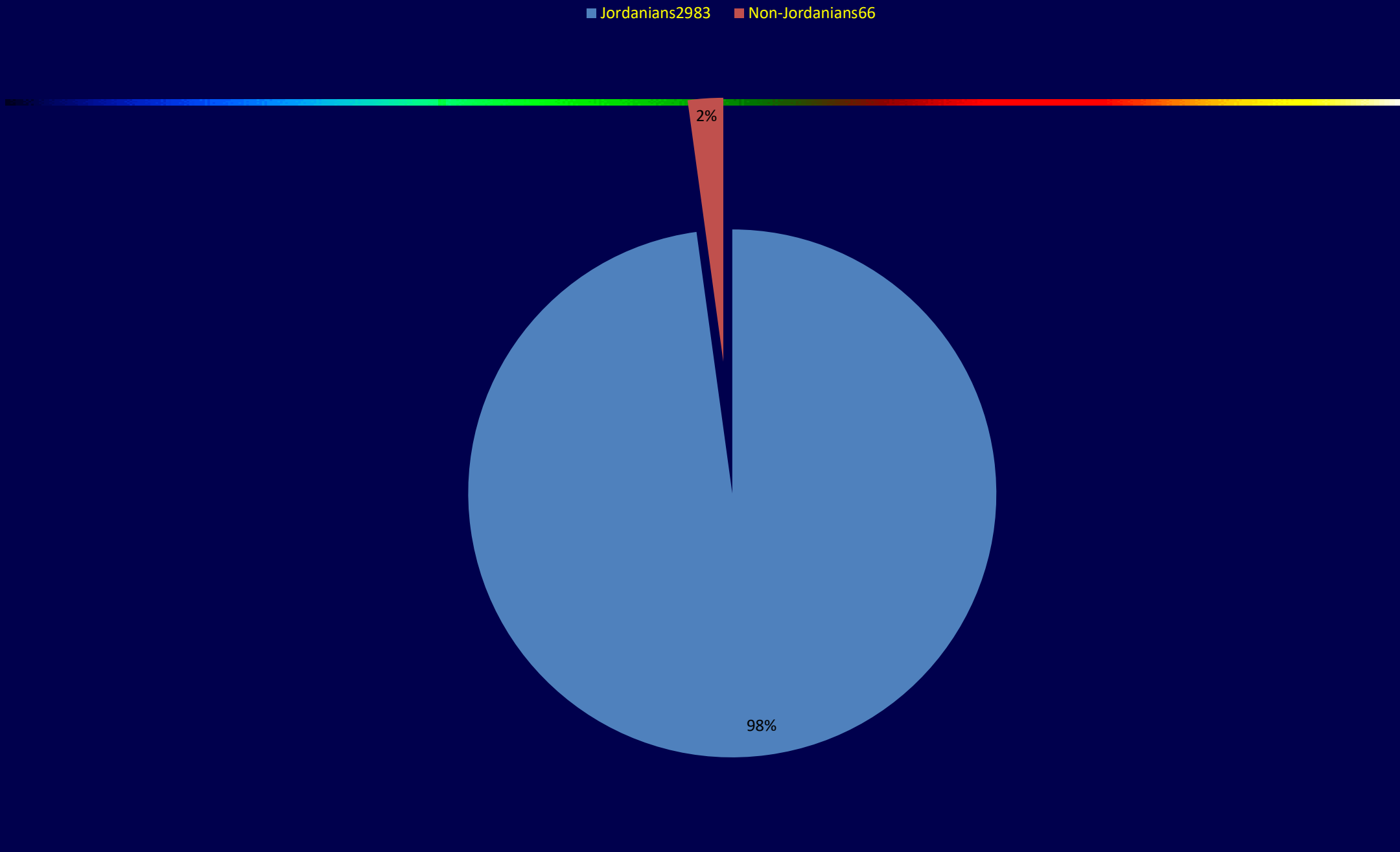
Epicurve :A (H1N1) cases, by International week ,Jordan, (2009)



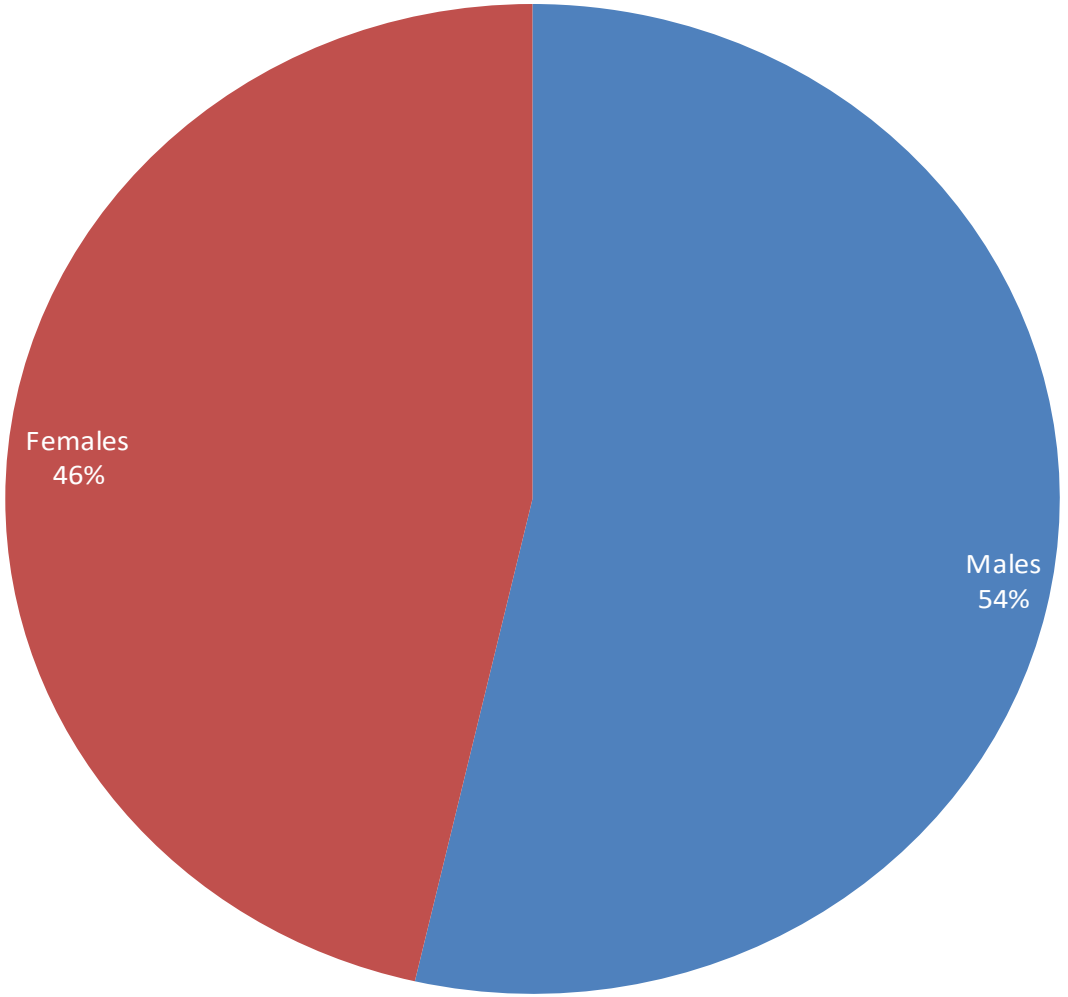
Distribution of patients by health sector

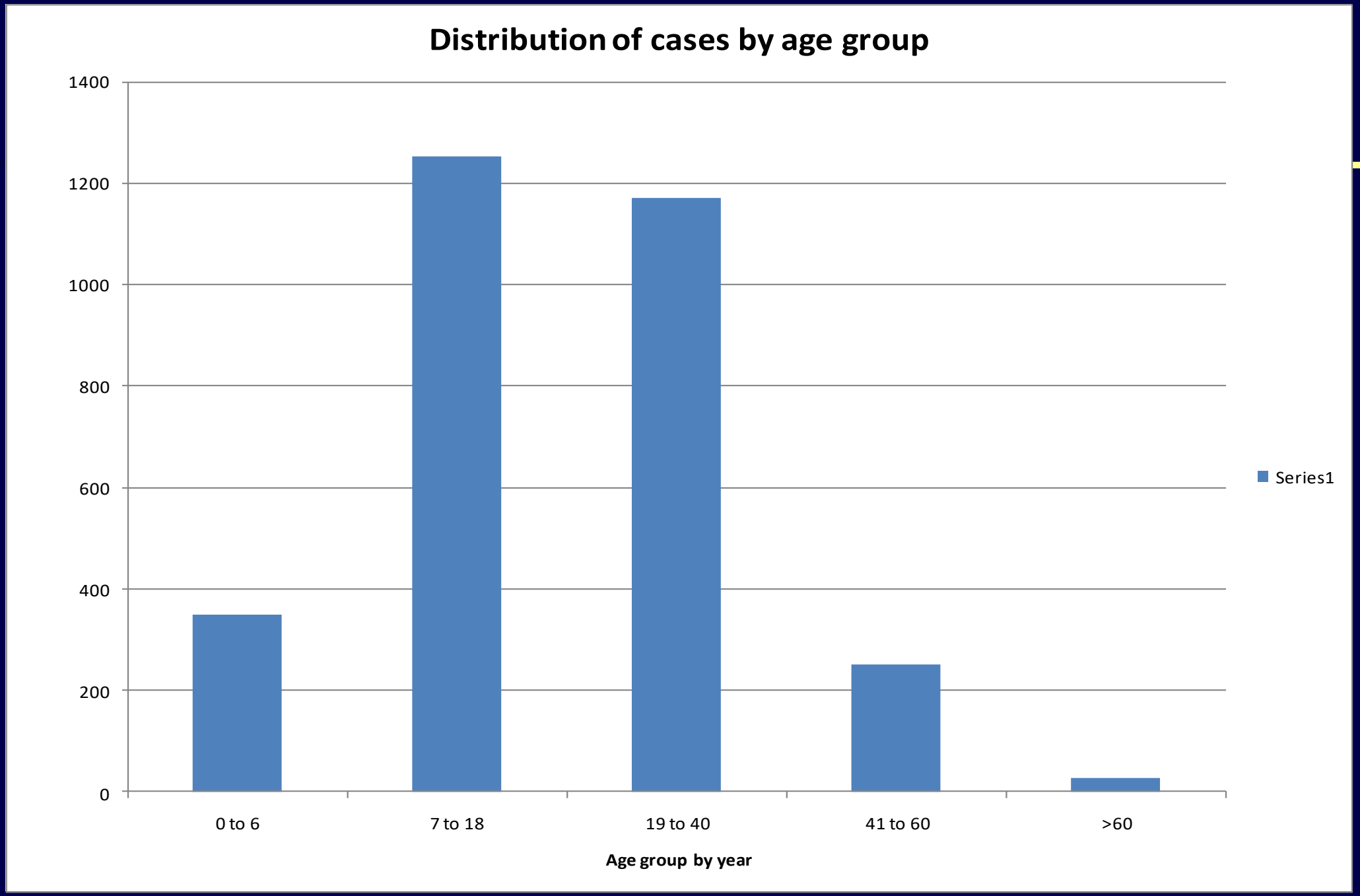
Sector	Number	Percent
Ministry of health	2218	73
RMS	372	12
JUH,KAH, KHC	426	14
Private sector	33	1
Total	**3049**	**100**

Distribution of patients by Nationality



Distribution of cases by Sex




Distribution of cases by age group
1400
1200
1000
800
600
400
200
0
0 to 6
7 to 18
19 to 40
41 to 60
>60
Age group by year
Series1

Age of patients ranged from two weeks to 99 years with a mean of 16.6 years (SD=10.5) and a median of 15 years

Deaths

- Total Number of deaths 16
- 1st death reported in 12/10/2009 (935)
- Age of died patients ranged from 4 years to 99 years with a mean of 32 years (SD=15) and a median of 15 years
- 6 cases (38%) were with chronic diseases
- 13 were(81%) were in serious condition at admission to the hospital

Lessons Learned

- Even with a well-prepared plan, some chaos may occur during the first days of the pandemic
- Plan of action should be updated frequently
- Surveillance system succeeded to detect early imported cases
- Appointing a spokesperson regarding the pandemic is essential (absence of conflicting information)
- Daily announcement of new cases and deaths played a negative role increasing the panic

Contin. . .

-NGOS and the private sector can play a positive role in many aspects (financing, educating their staff)
- Hot line to deal with of the public, may reduce the panic , direct sick people, and give
educational massages.
- Protocols of management should be more flexible:
    Admission
    Duration of admission
    Place of admission
- The role of thermo cameras is not essential to detect the imported cases
- Some times there was a gap between the public health standards and practices of health care providers in the hospitals

Opportunities of Surveillance system in Jordan

- Well organized health system
- Trained public health officers
- Presence of tools
- Political commitment
- Simple reporting
- WHO, CDC and other organizations support

Respiratory Diseases Surveillance Activities

Sentinel based Surveillance

- Influenza-like illness (ILI) in ambulatory patients
- Severe acute respiratory infection (SARI) and SARI mortality in hospitalized patients

Event based Surveillance

- Clusters/unusual or unexpected cases of SARI
- Unusual SARI mortality

Surveillance tools

- Surveillance Guideline
- Notifiable Diseases List
- Reporting Forms
- Investigation Forms

وزارة الصحة — مديرية رقابة الأمراض

قائمة الأمراض الواجب التبليغ عنها
List of Notifiable Communicable Diseases

مجموعة - أ - الأمراض الواجب التبليغ عنها فورا
Group A : Diseases to be notified immediately[7]

Acute Flaccid Paralysis (AFP)	الشلل الرخو الحاد
Cholera	الكوليرا
Diphtheria	الخانوق
Food poisoning	التسممات الغذائية
HIV/AIDS[2]	العوز المناعي البشري
Meningococcal diseases[3]	أمراض المكورات السحائية
Neonatal tetanus	الكزاز الوليدي
Pertusis	السعال الديكي
Plague	الطاعون
Poliomyelitis	شلل الاطفال
Rabies	داء الكلب
Suspected G. Measles[4] & Congenital Rubella Syndrome	اشتباه حصبة المانية ومتلازمة الحصبة المانية الخلقية
Suspected Measles[5]	اشتباه حصبة
Unexpected or unusual diseases or events[6]	الأمراض او الاحداث غير العادية او غير المتوقعة
Viral hemorrhagic fevers[7]	الحميات النزفية الفيروسية
Yellow fever	الحمى الصفراء

مجموعة - ب - الأمراض الواجب التبليغ عنها اسبوعيا وشهريا
Group B : Diseases to be notified weekly & monthly

Adverse Events Following Immunization	الآثار الجانبية للتطعيم
Animal bite	العقر الحيواني
Bacterial (non-meningococcal) meningitis	التهاب السحايا (عدا المكورات السحائية) البكتيري
Bilharziasis	البلهارسيا
Bloody diarrhea	الإسهال المدمي
Brucellosis	الحمى المالطية
Chicken pox	الجدري المائي
Cutaneous leishmaniasis	الشمانيا الجلدية
Diarrheas	الإسهالات
Hydatid cysts	الأكياس المائية
Malaria	الملاريا
Mumps	النكاف
Sexually transmitted diseases (STDs)[8]	الأمراض المنقولة عن طريق الجنس
Tetanus	الكزاز
Tuberculosis[9]	التدرن
Typhoid & paratyphoid	التيفوئيد والباراتيفوئيد
Viral hepatitis[10]	التهاب الكبد الفيروسي
Viral meningitis	التهاب السحايا الفيروسي

يتم الابلاغ لمديرية الصحة المعنية في المنطقة

مديرية رقابة الأمراض - هاتف : ٥٦٠٧١٤٤ - فاكس : ٥٦٨٦٩٦٥ - www.dcd.gov.jo

Influenza Surveillance

Two influenza surveillance programs :

- SARI (sever acute respiratory illness)
- ILI (influenza like illness)

SARI Surveillance sentinel sites :

1. Prince Hamza Hospital (MOH)
2. King Abdullah University Hospital in Irbid (University)
3. Al Karak Hospital (MOH)
4. Zarka Hospital; (Dec., 2014)

Objectives of SARI

- To describe the epidemiology of SARI
- To identify the etiologic agents for SARI
  - Influenza
  - Other viral agents
- To build epidemiological and lab surveillance capacity for respiratory pathogens
- To support pandemic preparedness activities

Methodology

- Standardized protocol and case definitions,

  Last update (WHO case definition)

- Identifying SARI cases by Well trained Surveillance

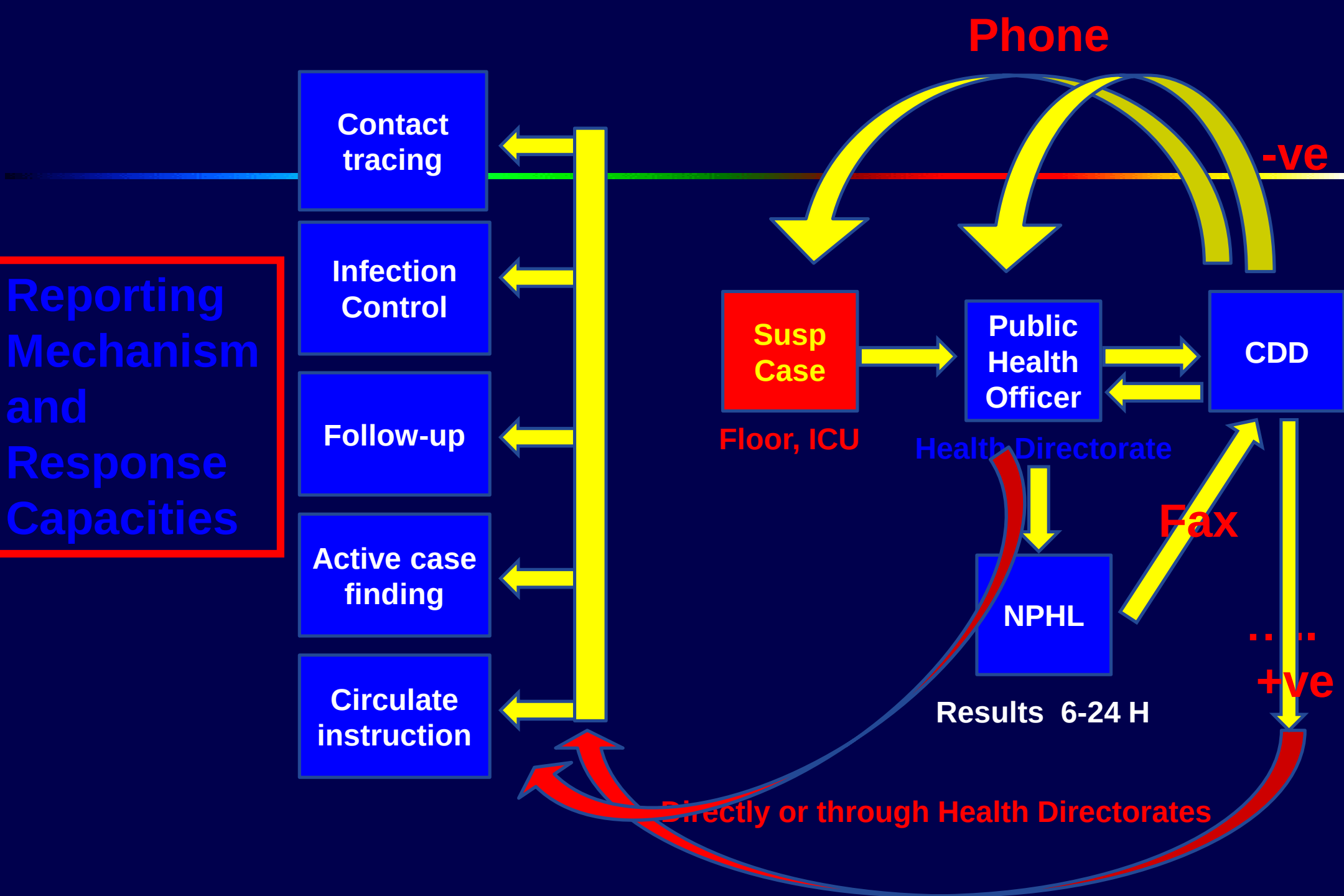
  Coordinators

- Training and capacity building and feedback (epi and lab)

- Enrollment all SARI patients

- Standardized data collection form
  - Demographics, clinical data,
  - history of antibiotics administration
  - hospitalization,
  - chronic diseases,
  - investigation data (lab and radiology)
  - outcome

- Follow up until discharge or death


Phone
-ve
Contact tracing
Infection Control
Follow-up
Active case finding
Circulate instruction
Reporting Mechanism and Response Capacities
Susp Case
Floor, ICU
Public Health Officer
Health Directorate
CDD
Fax
NPHL
Results 6-24 H
+ve
Directly or through Health Directorates

SARI Patient's Characteristics

	2010	2011	2012	2013	2014	2015
No. of enrolled Patients	551	611	434	430	693	958
Samples tested by PCR	488	599	431	425	673	958
Median Age (yrs)	1.2 yr (0.2.-98.7)	1 yr (0.5 – 99)	0.9 yr (0.1-101.2)	1.1 yr (0.01 -89)	1.4 yr (0.01-100)	6.8 0.01-105)
Proportion of Females	55.8%	56%	60.1%	61.3	56.9	56.6%

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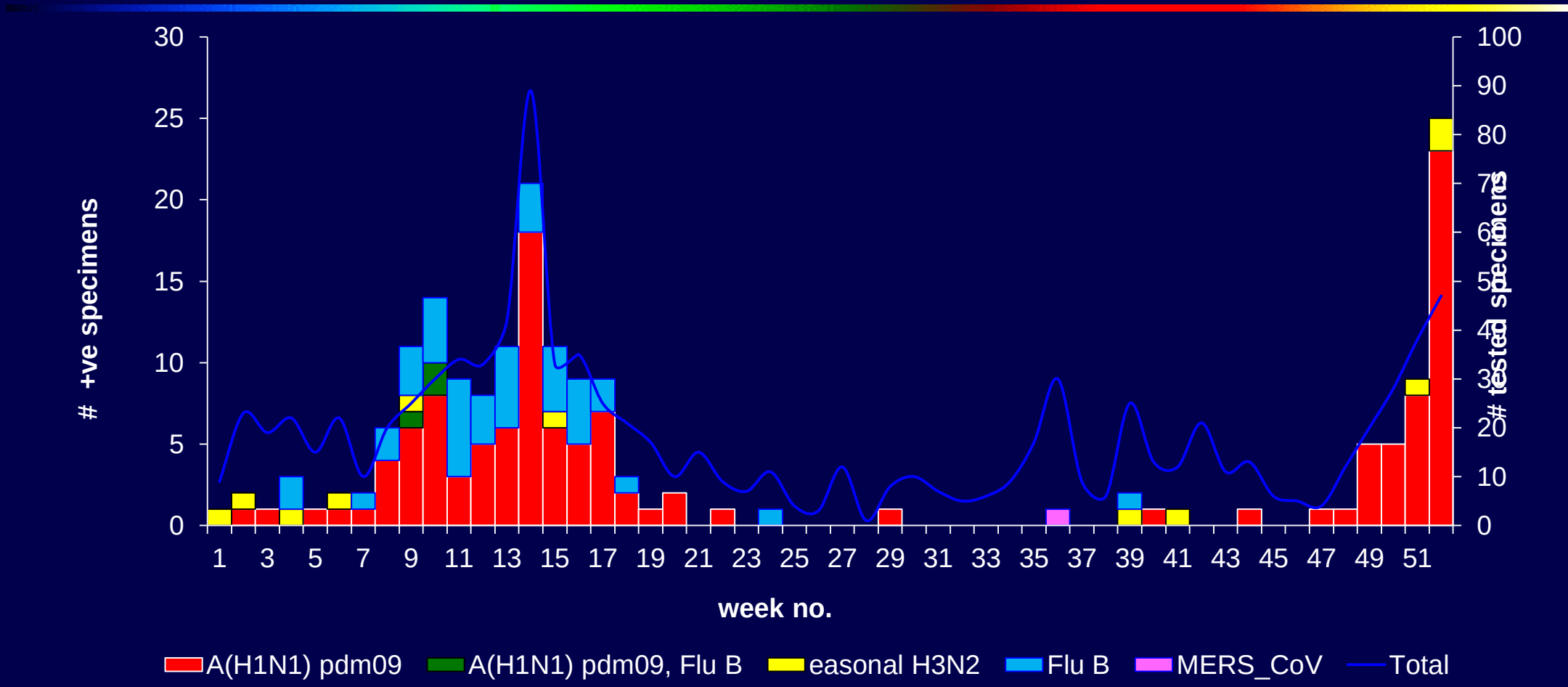
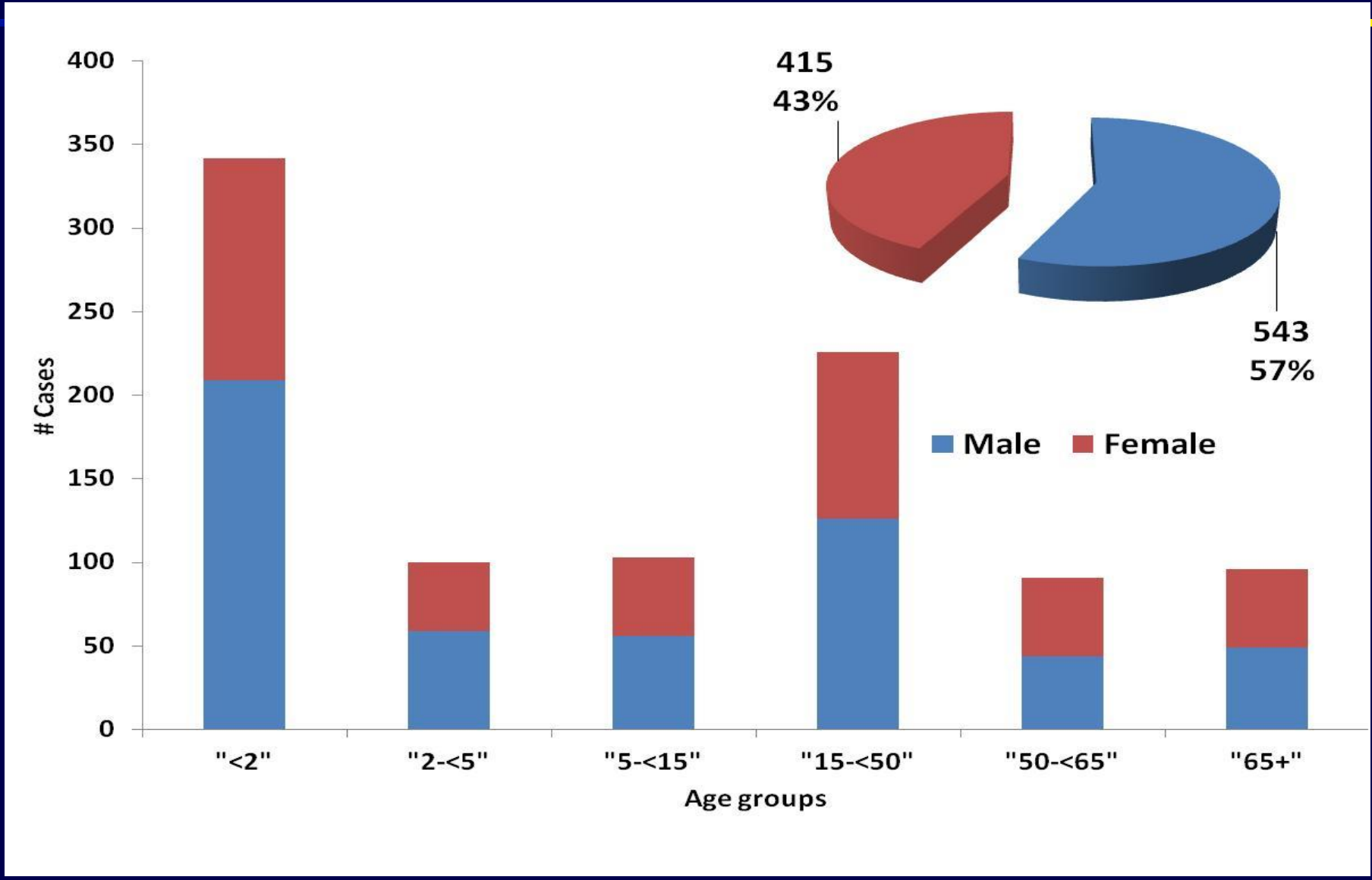
Proportion of males	55.8%	56%	60.1%	61.3	56.9	56.6%
Chronic conditions	24.5%	20.8%	18.8%	18.9	32.8	38.1
ICU admission	4.5%	5.6	4.4%	5.6	12.8	12.6
Ventilation	1.3%	1.5	0.5%	2.2	7.8	5.9
Mortality	0.5%	0.7%	0.7%	0%	0.3%	0.2%

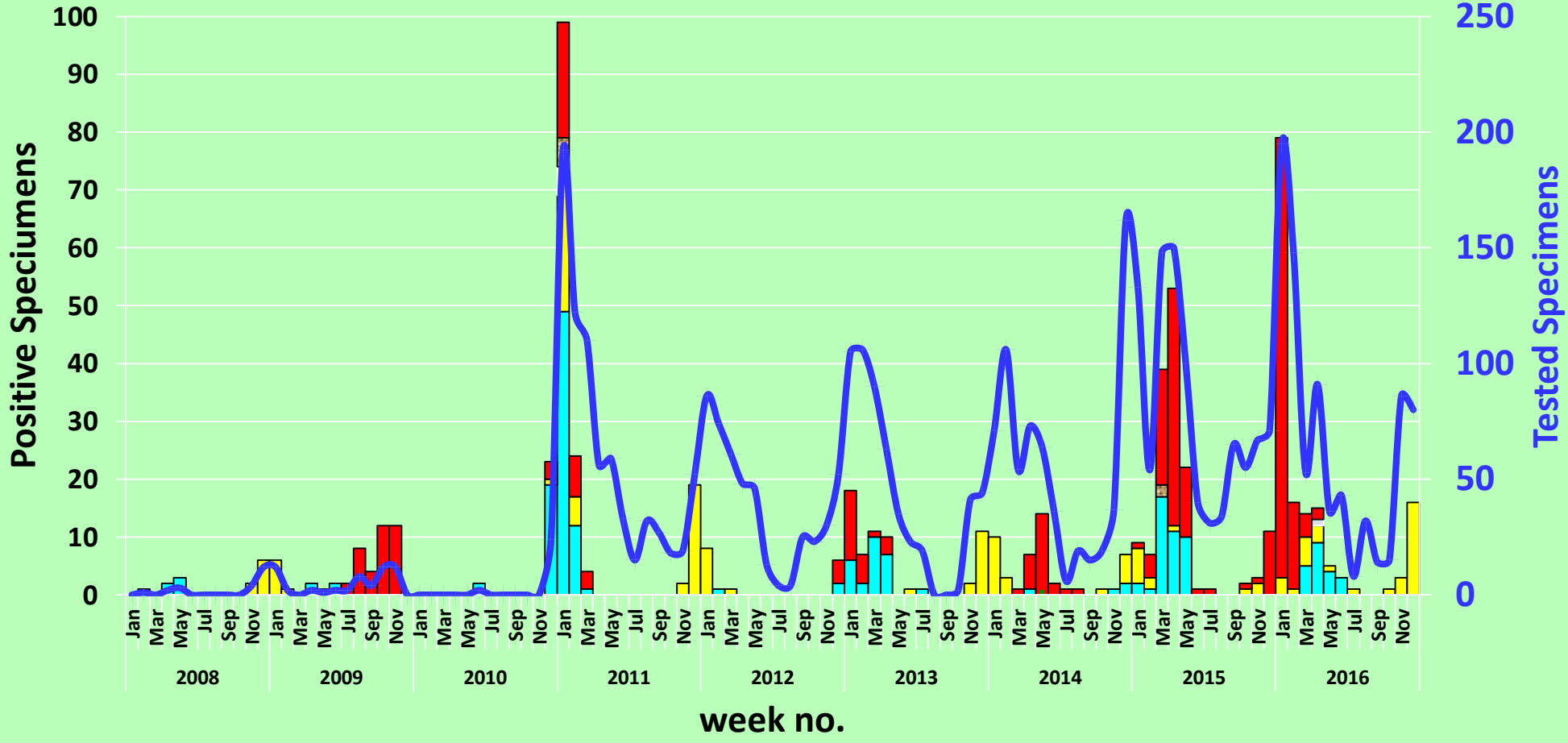
Epi-curve of SARI Cases, seasonality for influenza, 2015



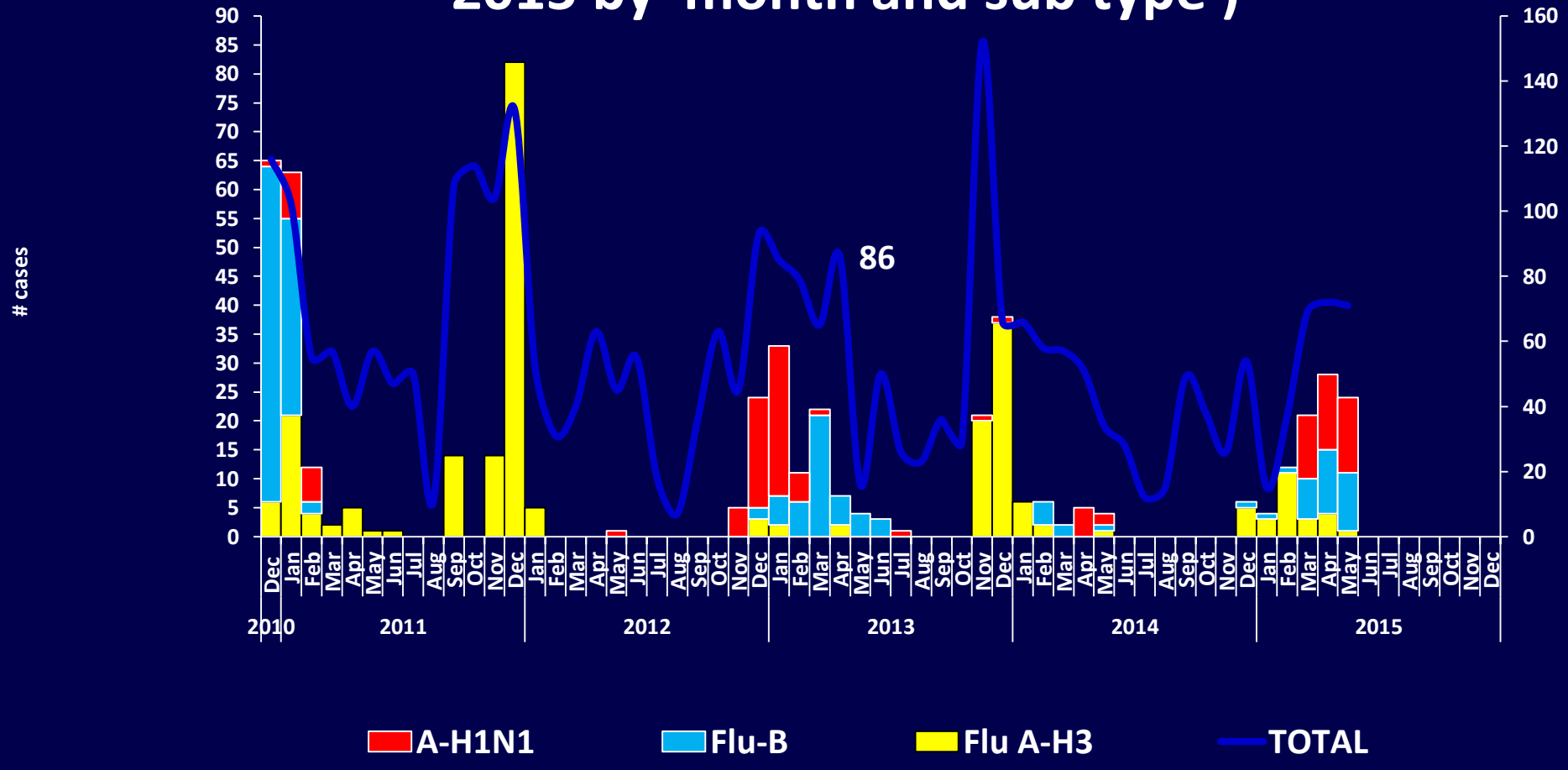
Influenza ,2015 –Jordan by age-groupe and gender



Distribution of positive SARI specimens by month of testing and type of influenza 2008-2016



Influenza Like Illness Surveillance, Jordan,2010-2015 by month and sub type)



Impact

- ✓ Epidemiology of Influenza cases
- ✓ Detection of the new strain
- ✓ Enhancing management protocol
- ✓ Identification the aetiology, determination the dominant strain
- ✓ Estimation of magnitude
- ✓ Identification patterns and trend of Influenza

Challenges

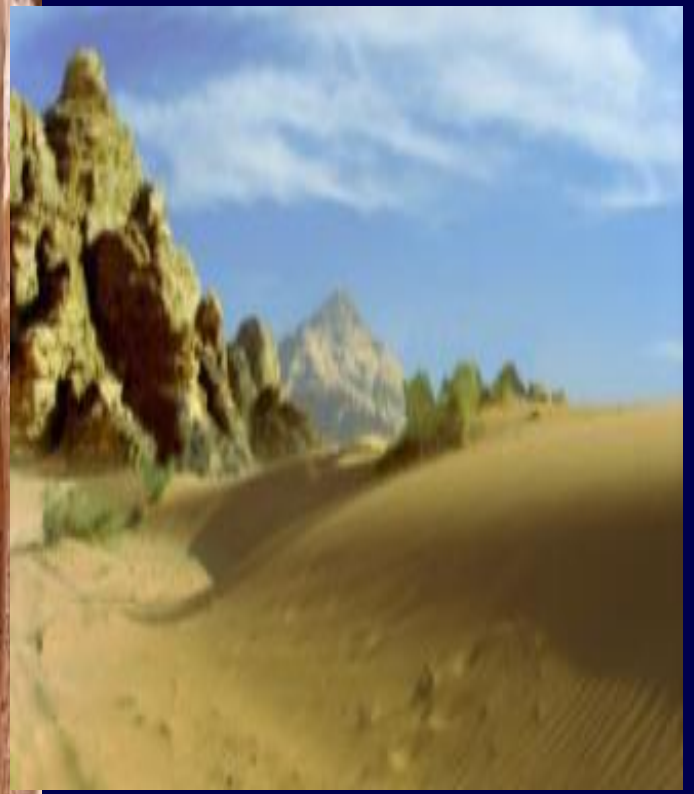
- Feedback
- Financial
- Awareness
- Case definition
- Underreporting
- Turnover
- IT: Internet, Fax, Telephone
- Personnel shortage

Next Step

More accurate estimation of magnitude

- Including bacterial and other viral etiology
  - Expansion sentinel sites
    - Other 4 sentinel sites
      - 1, North
      - 1, South
      - 2, Middle (Zarka)

Priorities for introduction of vaccine in national immunization program

- As a priority for the national immunization program is the introduction of pneumococcal vaccine .
- The NITAG recommended as priority for immunization program is introduction of the following vaccines (pneumococcal vaccine , Rota vaccine- introduced 2015, Varicella vaccine ,and Hep A vaccine)
- Influenza vaccine is given to the concerned HW/ MOH personnel and its recommended for pilgrims & high risk groups.

THANKS