IRAN

6th Mena Influenza Stakeholders Meeting

Organized by Fondation Mérieux

Prague, Czech Republic
6-7 April 2017

MENA ISN OBJECTIVES

(for reference purposes)

1. **Improve Surveillance and Disease Burden Data**
   - Support the WHO initiative in building laboratory capacity and surveillance in the MENA region and urge the governments to give high priority to the establishment and continued support for influenza surveillance systems.
   - Identify the needs of countries for establishing or improving existing surveillance networks
   - Disseminate surveillance and disease burden data through publications.

2. **Increase the Evidence-based Communication on Influenza Burden and Benefits of Vaccination**
   - Bring together key stakeholders to in local country identify and discuss common concerns and challenges in communicating the importance and benefits of seasonal influenza vaccination, addressing misinformation
   - Be the active advocate for acceptance of vaccinationby health professionals and the public
   - Identify effective communication tools

3. **Increase the Number of Countries with Flu Vaccination in Their National Immunization Programs**
   - Provide/increase official recommendations for influenza vaccination
   - Provide /increase funding for vaccination by governments

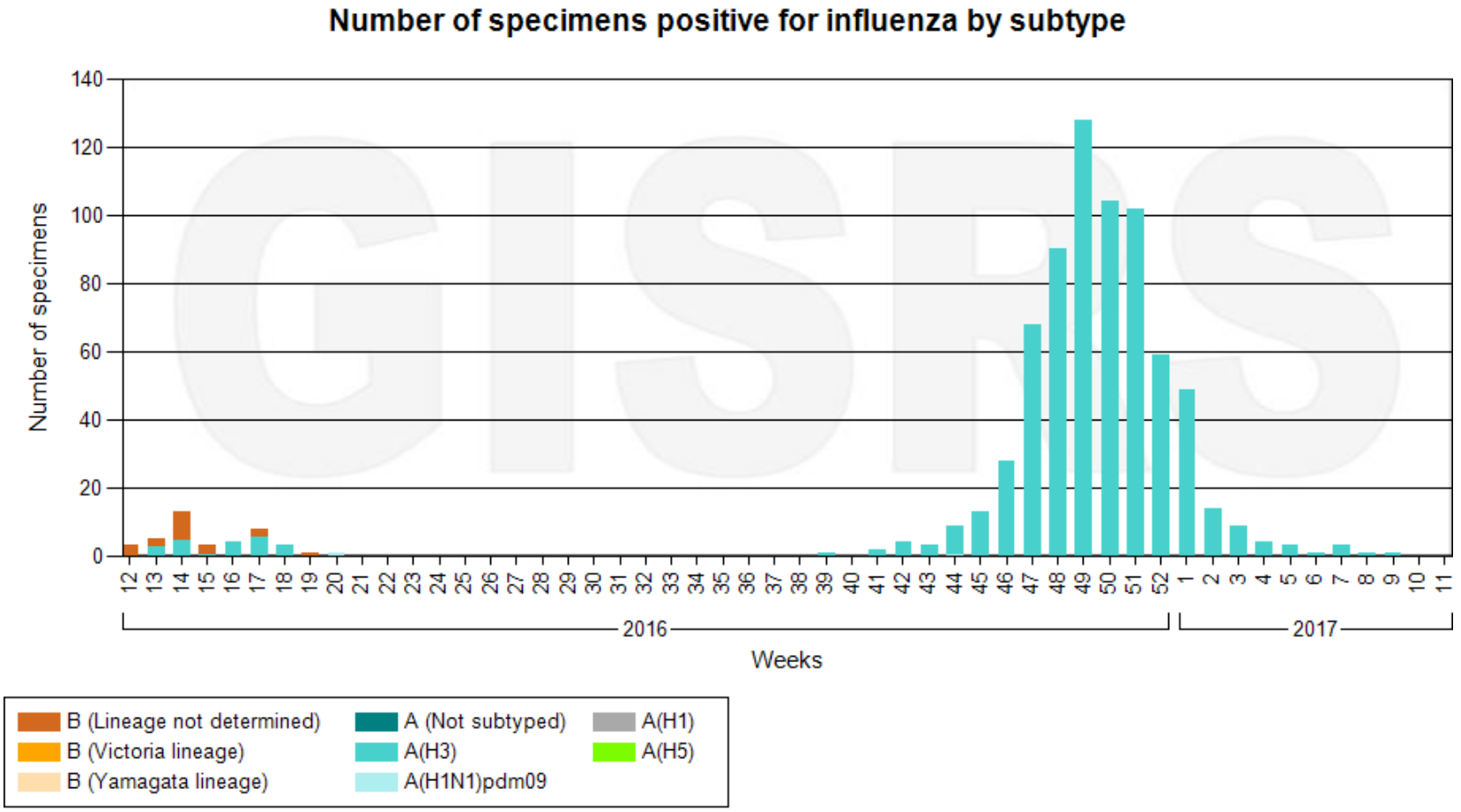
1. **Improve the Monitoring of Influenza Coverage Rates to Increase the Rates**
   - Define barriers and drivers among lay public, Health Care Staff and Health Authorities
   - Set official «vaccination coverage rate targets» customized to the countries
   - Develop actions to increase vaccination coverage rates in pregnant women, people at risk, elderly and children (vaccination campaigns)

COUNTRY OBJECTIVES FOR THE UPCOMING 3 YEARS

- Improvement of influenza surveillance system
- Increase coverage rate to prevent vaccine preventable disease mortality
- Expanding the list of high risk influenza vaccine eligible for free of charge vaccine

including pregnant women, elderly, health care providers

COUNTRY EPIDEMIOLOGICAL UPDATE



ACTION PLAN COMPONENTS UPDATE

COMPONENTS / Actions	Progress achieved since the beginning of MENA INS?	2017 – 2018- Future actions to attain (to be completed in September)	Challenges
SURVEILLANCE	Approved by Technical influenza committee Waiting for financial resource IT issue seems to be better by sending not all but most of patients PCR requests for Influenza detection by IT system		Most of existing surveillance site are not IT oriented
VACCINATION	Coverage in special host have been increased		Budget limitation

ACTION PLAN COMPONENTS UPDATE

COMPONENTS / Actions	Progress achieved since the beginning of MENA INS?	2017 – 2018- Future actions to attain (to be completed in September)	Challenges
SOCIAL MOBILIZATION / EDUCATION / AWARENESS	• Was done in Annual influenza seminar in Oct 2016 • Seminar in Shahid Beheshti medical university for increasing influenza coverage in Nov 2016 • Expertise evaluation on elderly high risk patients on Influenza in Atherosclerosis society with attendance of 10 expert→ the proposal presented to MOH and sponsors • Promotional materials by Sanofi Pasteur are provided and distributed in field		Budget limitation

ACTION PLAN COMPONENTS UPDATE

COMPONENTS / Actions	Progress achieved since the beginning of MENA INS?	2017 – 2018- Future actions to attain (to be completed in September)	Challenges
ADVOCACY & POLICY	• Communication with decision makers at MOH level is Ongoing .negotiation with decision makers related to multiple factors. Eg: budget, human resources, HCWs, General population • New members in IPWI from MOH & National influenza lab • Communication with expert societies is done with Infectious disease of Shahid Beheshti • , ISCMID, Atherosclerosis societies, • Diabetes association, Ped infectious disease research center, Endovascular research center		• Wrong current believe of vaccine safety and efficacy • Lack of statistical data on Indirect cost

Recent Activity

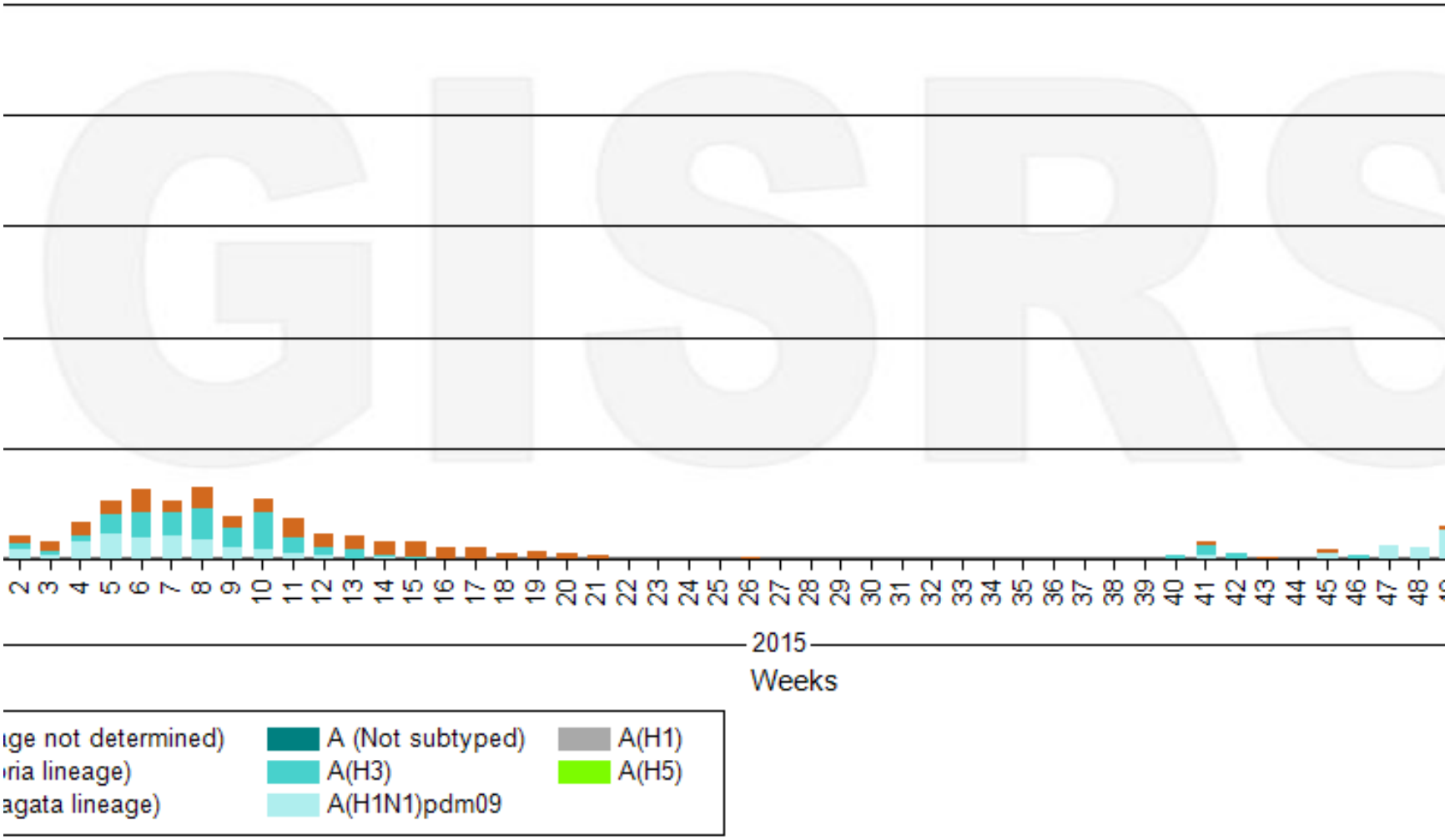
Dr Mardani:

The effect of influenza vaccination on **HIV positive** recipients in Q1 2016

Influenza Vaccination in Identified People Living with HIV/AIDS and Health Care Providers of Triangular Clinics I.R.Iran, 2015-2016

Mohammad Mehdi Gouya, Katayoun Tayeri, Hossein Akbari, Farshid Rezaei, Peyman Hemmati, Mahmood Soroush, Masoud Mardani

Number of specimens positive for influenza by subtype



- **Influenza usually has a benign and self-limited course in general population but sometimes leads to moderate to severe complications.**

- **Sinusitis, bronchitis and pneumonia are some of the known complications of Influenza and may need to hospitalization**

- **Influenza is one of the main causes of exacerbating the underlying diseases like asthma and congestive heart failure.**

- **At risk groups for influenza are children<2, old age >65, pregnant women, residents of nursing home, individuals with neurologic disorders, chronic pulmonary and cardiovascular diseases and PLWH**

- **Influenza vaccination is recommended as an preventive strategy for at risk people.**

- **Several studies showed destructive effects of influenza in PLWH and acceptable flu vaccine efficacy on them**

- **In a study, incidence of influenza in vaccinated and unvaccinated PLWH during flu season was 6% and 21% respectively**

- In a cohort study, 3 patients from 26 PLWH who infected with influenza were admitted in ICU
- ICU admission rate in PLWH with influenza was 10% and 4.7% in another studies
- In two studies hospitalization rate of PLWH infected with influenza were about 33% and 54% respectively

- **In Iran, counseling center for behavioral diseases (triangular clinics, TC) are the main centers which provide regular and free of charge HIV/AIDS care and treatment services.**

- **Trivalent flu vaccination is provided annually to all PLWH and TCs' staff.**

- **In this study we investigated flu vaccination coverage in PLWH and its complication, severe acute respiratory illness (SARI), hospitalization and death rate in PLWH and TCs' personals from November 20 2015 – January 22 2016**

- **Data was gathered from 49 clinics throughout the country with a questionnaire. 5336 from 9554 registered PLWH vaccinated with trivalent flu vaccine (56%).**

- **Most of un-vaccinated individuals were patients who did not refer to triangular clinics**

- From 20 November to 22 January, 177 PLWH reported mild respiratory illness, and 12 patients were hospitalized due to SARI (125/100,000).

- **No one need to ICU and no death** was reported. 9 from 12 hospitalized patients had history of flu vaccination.

- Mean and median time of hospitalization was 7 and 9.25 days respectively

- **From 555 health care providers who were working in TCs, 409 were vaccinated (74%) and one of them hospitalized due to SARI.**

- **No one need to ICU and no death was reported**

- At the same time, among general population 28576 individuals were hospitalized due to SARI throughout the country which 20726 of them were sampled for influenza virus, 3216 positive result were reported.

- 1047 patients died from severe respiratory illness which 254 of them had positive results for influenza

- **Influenza vaccine complication is very low. Some of the mild complication are redness/pain of injection site, low grade fever, light headache, nausea and myalgia**

- **In some studies very low possibility of relation between Guillain-Barre syndrome (GBS) and influenza vaccination have been considered but this relation was not approved with many other studies**

- **Indeed, incidence of GBS after influenza is much more likely than developing GBS after influenza vaccination**

- **In this study, no major complication from influenza vaccination was reported in PLWH and health care providers**

- **Health care providers of TCs should be vaccinated annually.**

- **Interview with un-vaccinated personals showed that there are some misconception about influenza vaccine and its complications, including GBS, which is the leading cause of unwilling to flu vaccination**

- **Regarding to the results of this study, for reducing the misconception about influenza vaccine, especially among health care providers, it is necessary to hold training course for them and update their information about the efficacy and importance of influenza vaccination.**

- **Obviously, trained personals can have more willing to encourage the PLWH to be vaccinated**

- **Although in this study we had several limitations but we can concluded that vaccination of PLWH can protect this high risk group against influenza infection and it's severe consequences**

References

1.Peltola VT, Boyd KL, McAuley JL, Rehg JE, McCullers JA. Bacterial sinusitis and otitis media following influenza virus infection in ferrets. Infection and immunity. 2006;74(5):2562-7.

2.Beck JM, Rosen MJ, Peavy HH. Pulmonary complications of HIV infection: report of the fourth NHLBI workshop. American journal of respiratory and critical care medicine. 2001;164(11):2120-6.

3.Kunisaki KM, Janoff EN. Influenza in immunosuppressed populations: a review of infection frequency, morbidity, mortality, and vaccine responses. The Lancet infectious diseases. 2009;9(8):493-504.

4.Yamanaka H, Teruya K, Tanaka M, Kikuchi Y, Takahashi T, Kimura S, et al. Efficacy and immunologic responses to influenza vaccine in HIV-1-infected patients. JAIDS Journal of Acquired Immune Deficiency Syndromes. 2005;39(2):167-73.

5.Riera M, Payeras A, Marcos MA, Viasus D, Farinas MC, Segura F, et al. Clinical presentation and prognosis of the 2009 H1N1 influenza A infection in HIV-1-infected patients: a Spanish multicenter study. Aids. 2010;24(16):2461-7.

6.Perez CM, Dominguez MI, Ceballos ME, Moreno C, Labarca JA, Rabagliati R, et al. Pandemic influenza A (H1N1) in HIV-1-infected patients. Aids. 2010;24(18):2867-9.

7.Bogoch II, Andrews JR, Marty FM, Hohmann EL. HIV-1 and 2009 H1N1 influenza A in adults. JAIDS Journal of Acquired Immune Deficiency Syndromes. 2011;56(4):e111-e3.

8.Isais F, Lye D, Llorin R, Dimatatac F, Go C-J, Leo Y-S, et al. Pandemic (H1N1) 2009 influenza in HIV-infected adults: Clinical features, severity, and outcome. Journal of Infection. 2010;61(5):437-40.

9.Nyhan B, Reifler J. Does correcting myths about the flu vaccine work? An experimental evaluation of the effects of corrective information. Vaccine. 2015;33(3):459-64.

10.Vellozzi C, Iqbal S, Broder K. Guillain-Barre syndrome, influenza, and influenza vaccination: the epidemiologic evidence. Clinical infectious diseases. 2014;58(8):1149-55.

Recent Activity

Dr Mardani:

Case control study of pregnant women with Influenza

impact on mortality and outcomes analysis

Control Study for Risk Factors and Outcomes of Seasonal Influenza in Pregnant Women with Severe Acute Respiratory Illness (SARI) Referred to Health Centers Iran 2015-2016

Masooud Mardani MD,MPH,FIDSA

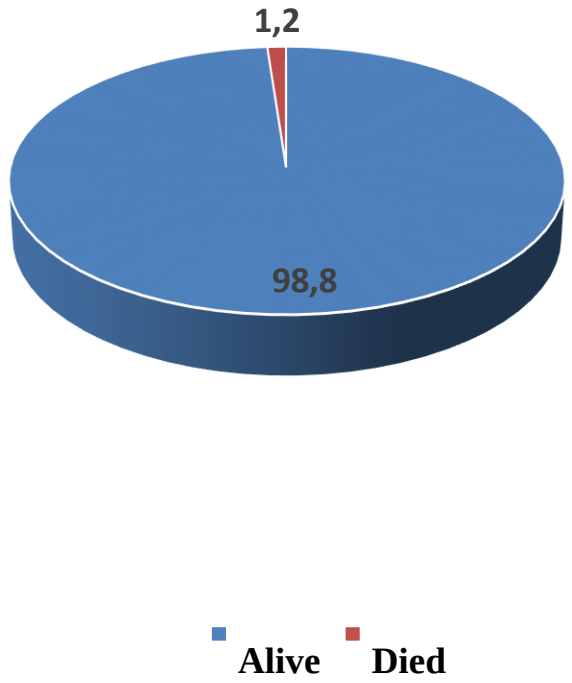
Prof of Infectious Disease

Anita Yazdani MD

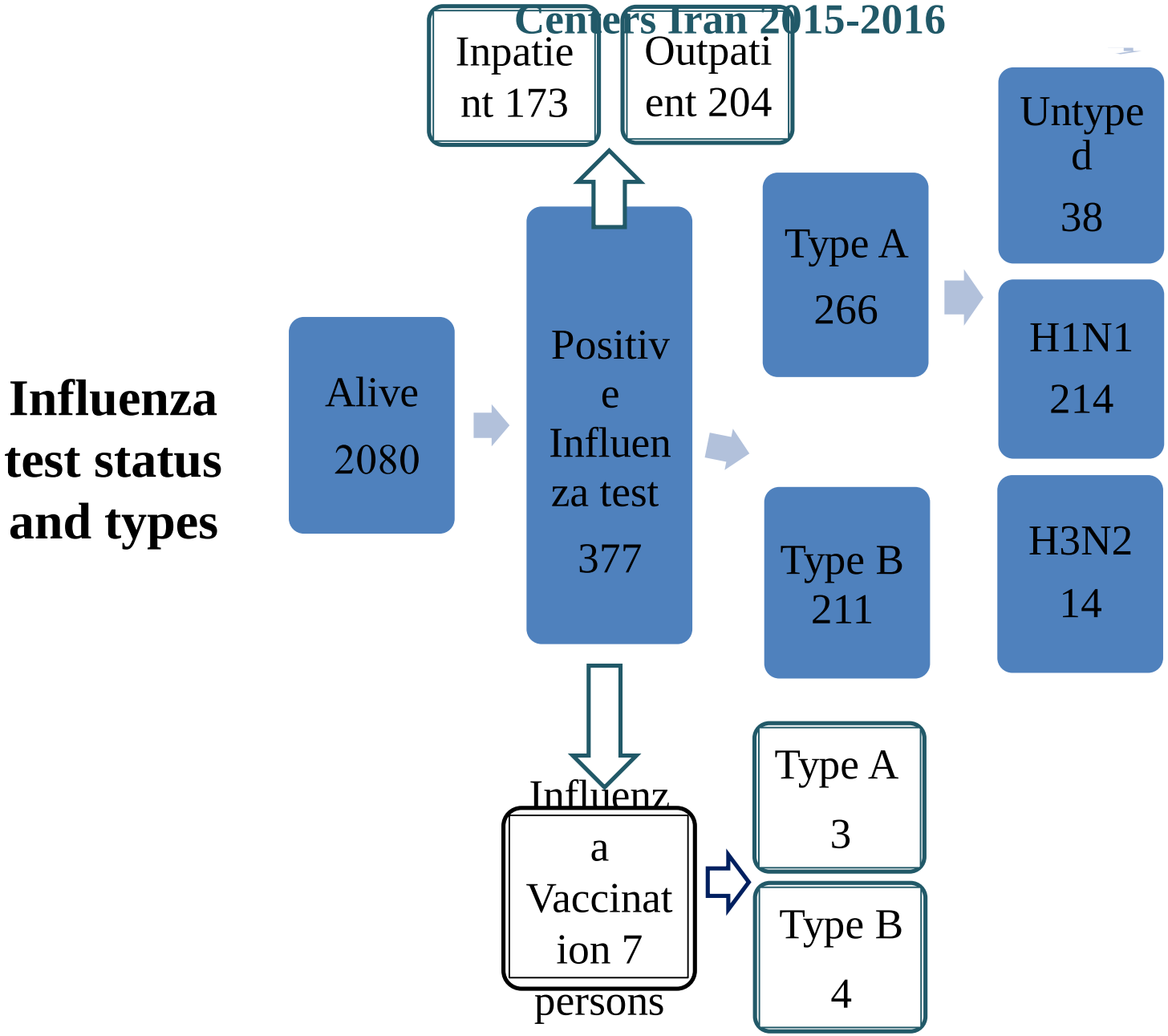
Shahid Beheshti Medical University Tehran -Iran

Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Population	Frequency	Percent
Alive	2080	98.8
Died	24	1.2
Sum	**2104**	**100**

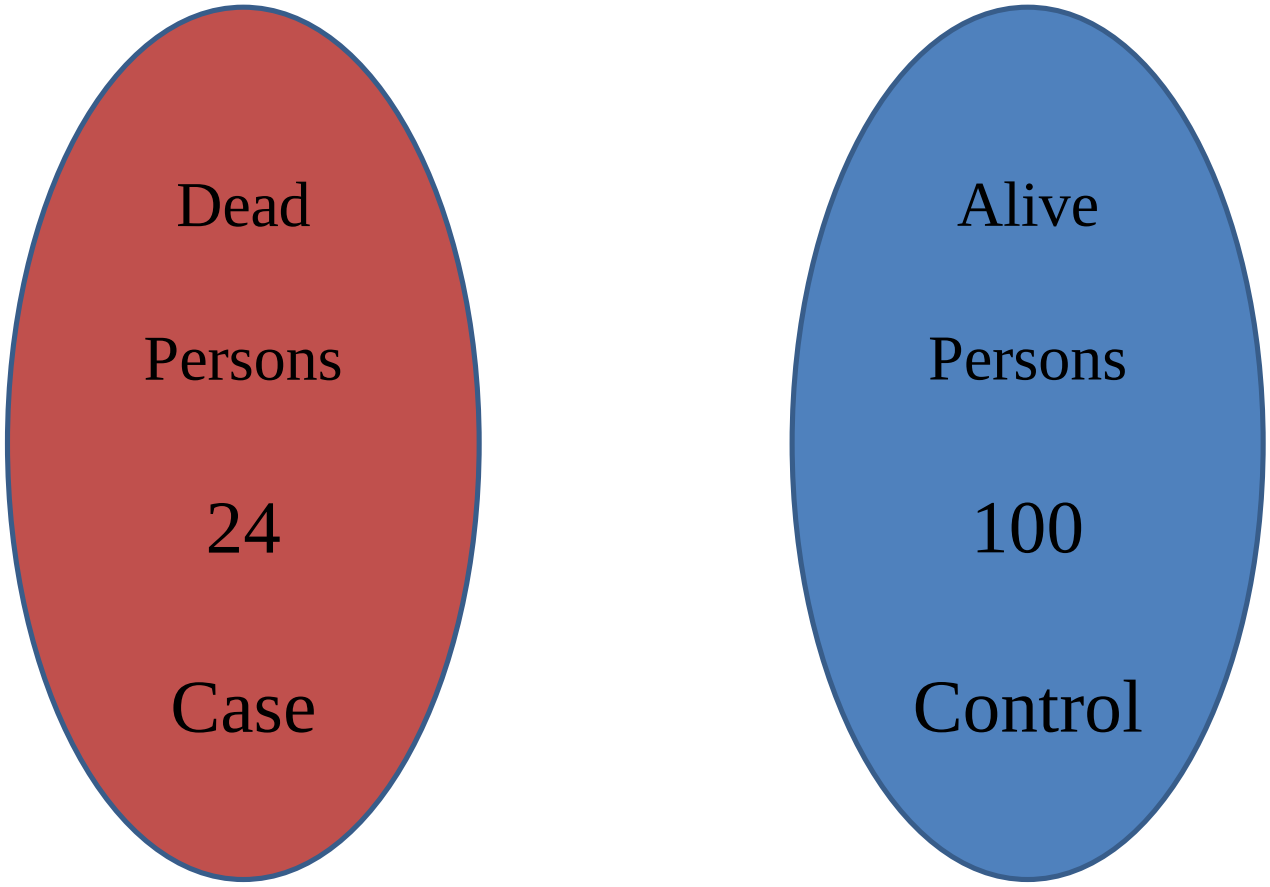


Demographic of Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

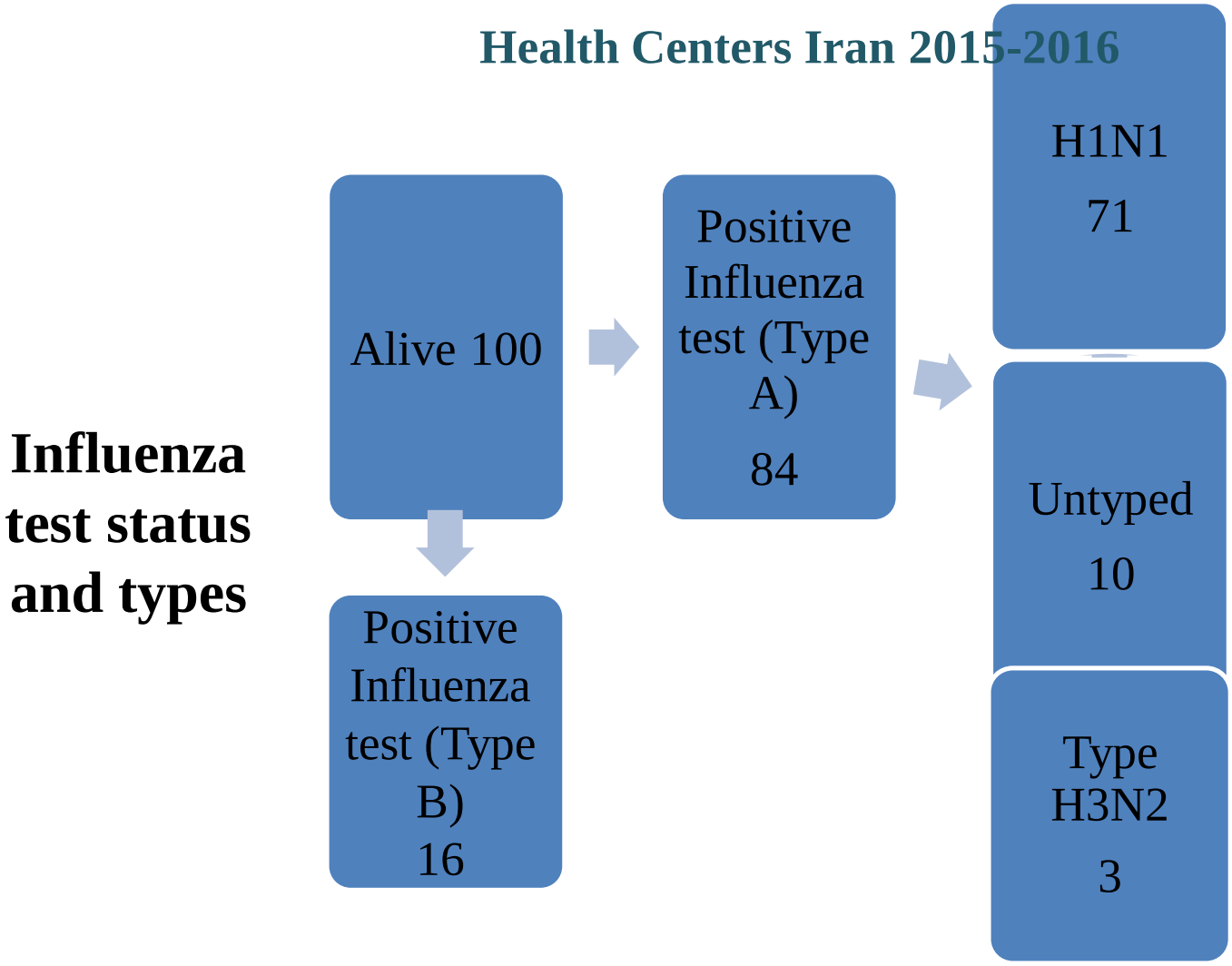


Influenza Test of Died Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Control Study of Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

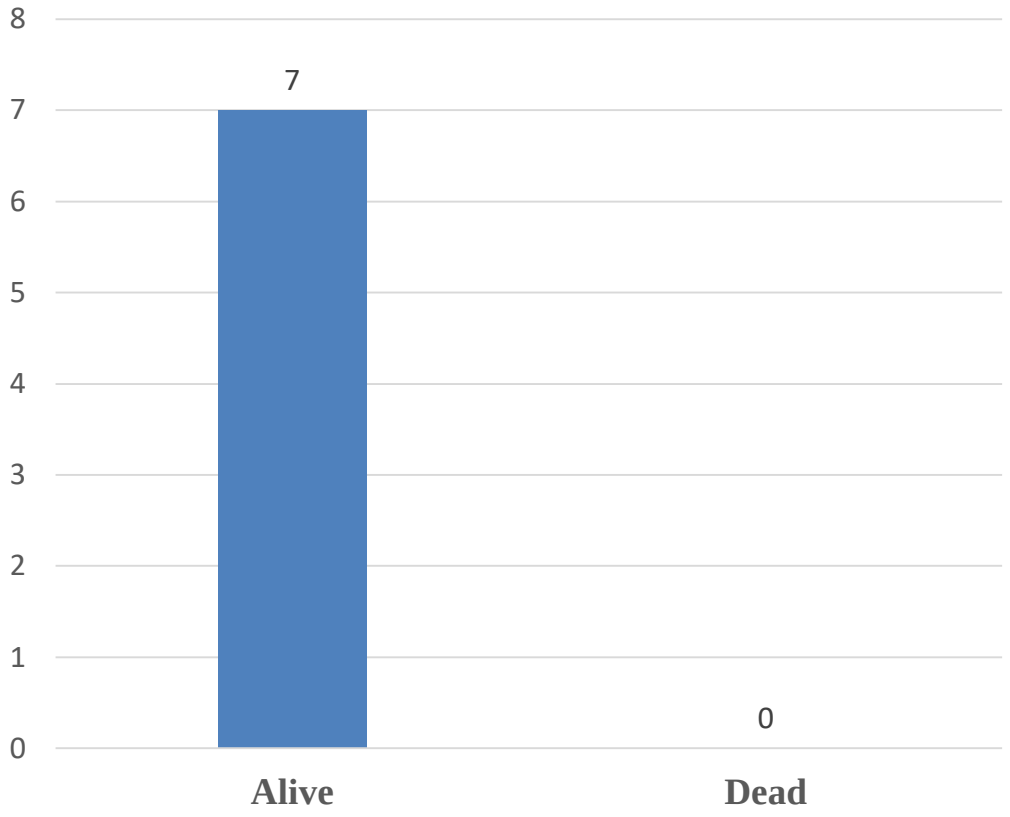


Type of Influenza in alive Pregnant Women with SARI Referred to Health Centers Iran 2015-2016



% of Influenza Vaccination in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

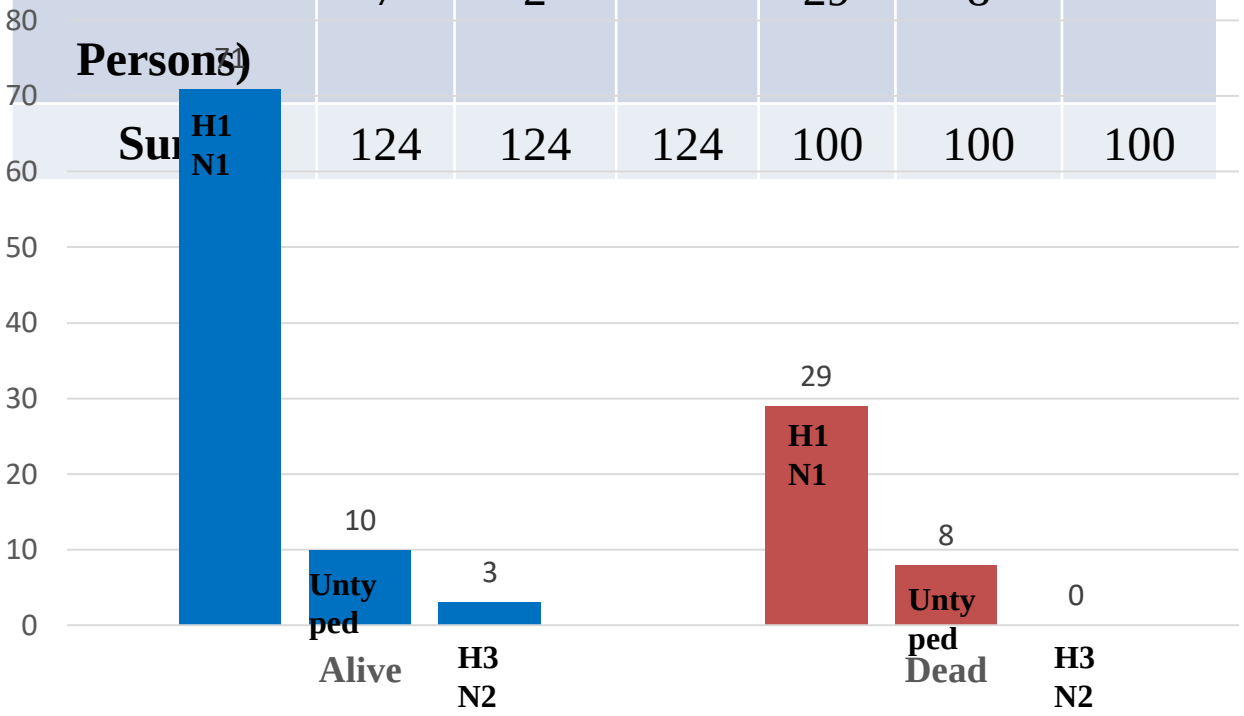
Influenza Vaccination	Frequency	Percent
Alive (100 Persons)	7	7
Died (24 Persons)	0	0
SUM	124	100



Subtype of Influenza in Pregnant Women with SARI

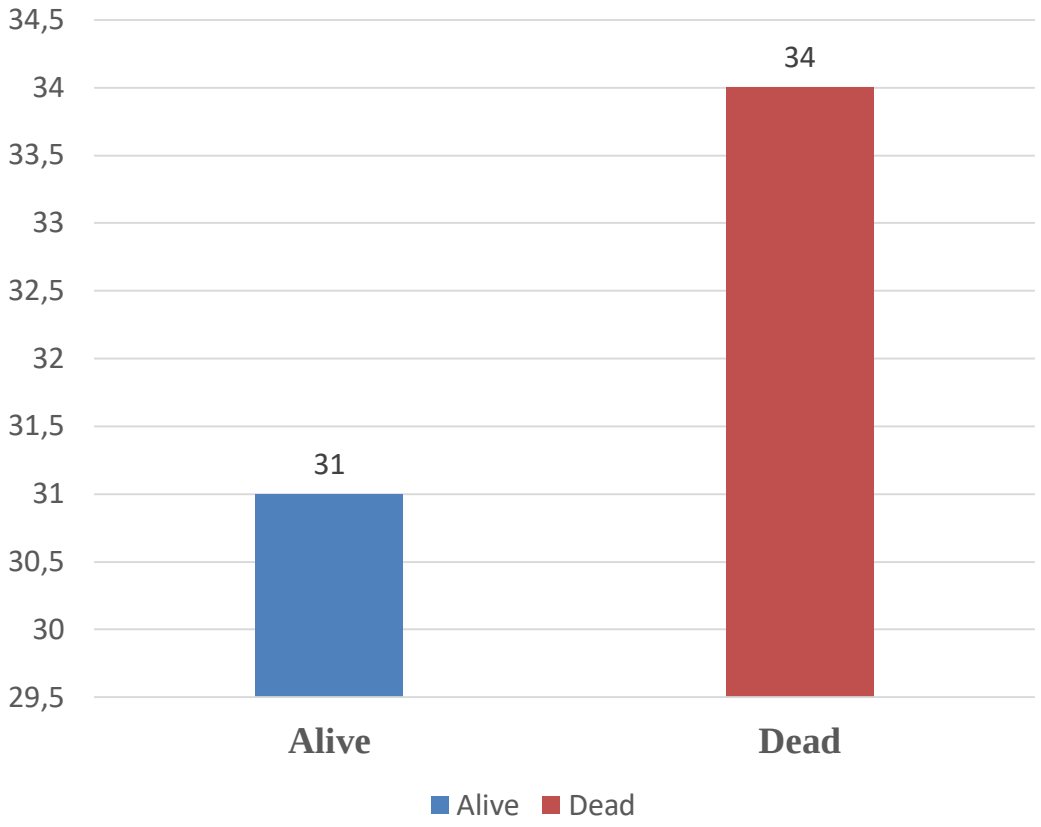
Referred to Health Centers Iran 2015-2016

Influenza test status and types	Frequency (Type A)			Percent (Type A)		
	H1N1	Untyped	H3N2	H1N1	Untyped	H3N2
Alive (100 Persons)	71	10	3	71	10	3
Died (24 Persons)	7	2	-	29	8	-
Su	124	124	124	100	100	100



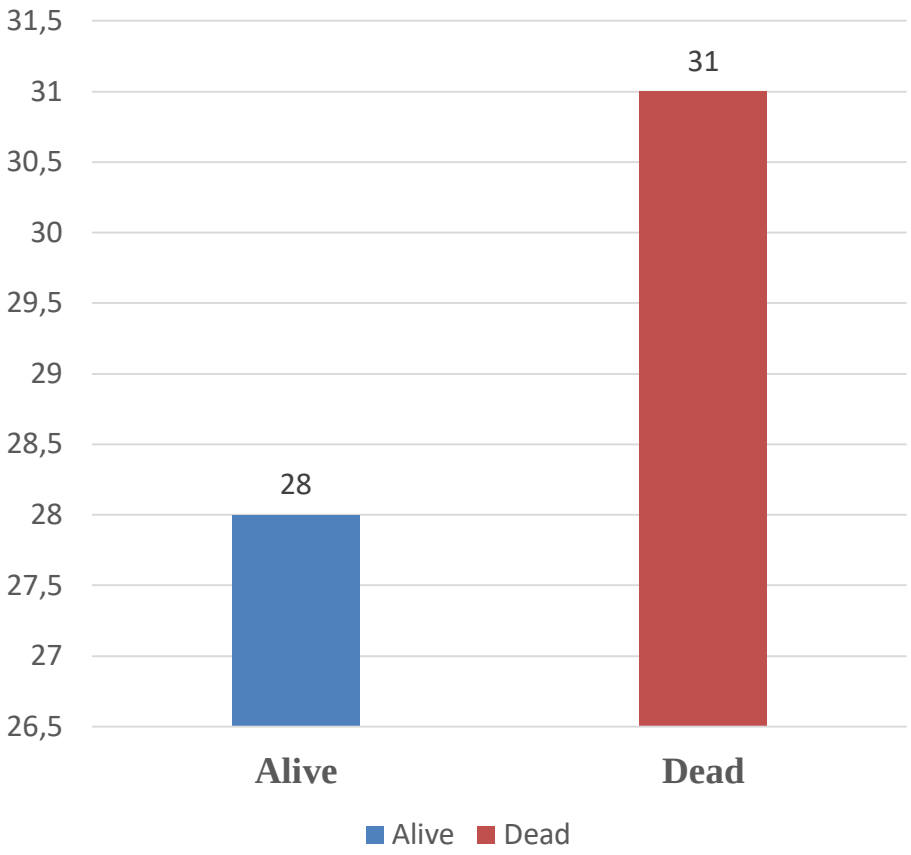
Age of Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Population	Average Age (Year)
Alive (100 Persons)	31
Died (24 Persons)	34



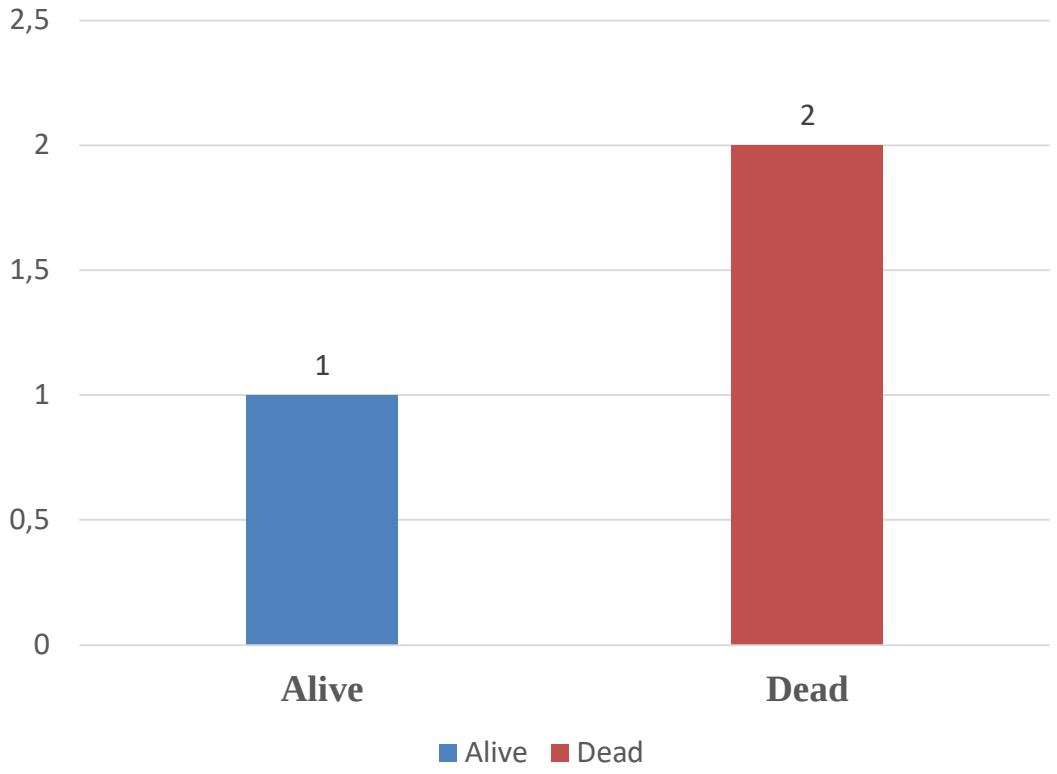
Gestational Age of Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Population	Average Gestational Age (Week)
Alive (100 Persons)	28
Died (24 Persons)	31



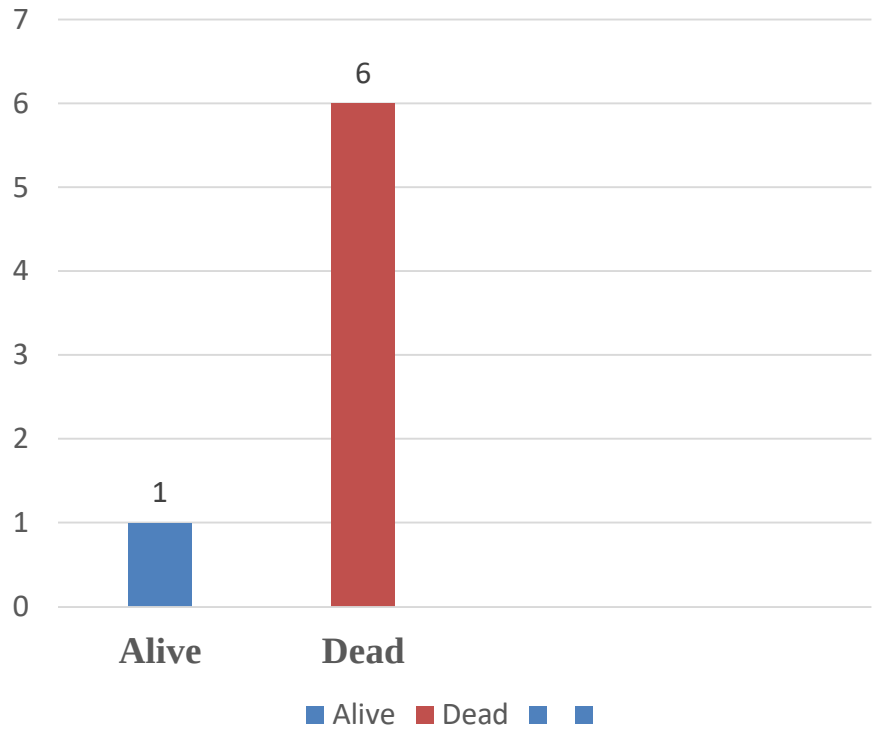
Average Parity of Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Population	Average Parity
Alive (100 Persons)	1
Died (24 Persons)	2



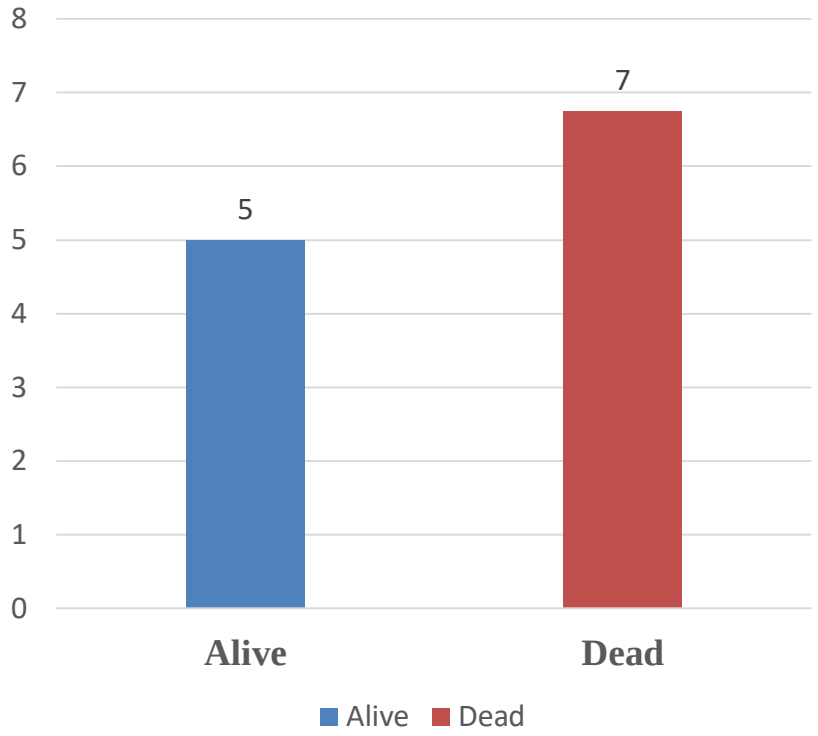
Average Days of Delay in Referral of Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Population	Average Delay of Referral to Health Centers (Day)
Alive (100 Persons)	1
Died (24 Persons)	6



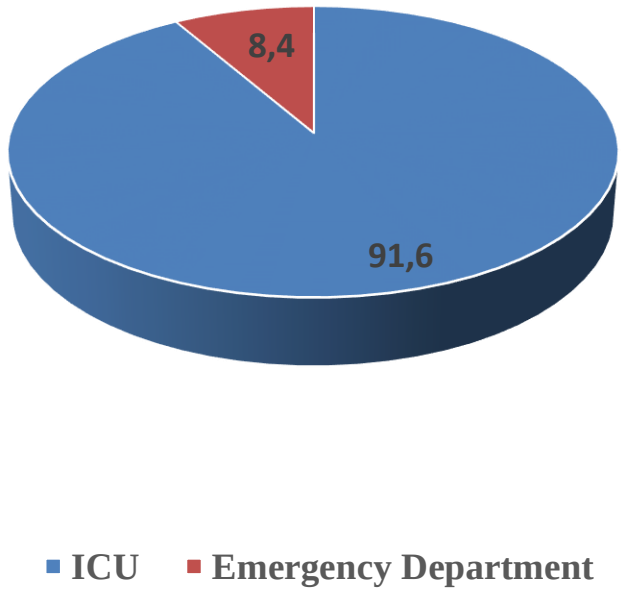
Average of Hospitalization of Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Population	Average of Hospitalization (Day)
Alive (100 Persons)	5
Died (24 Persons)	7



Place of Death in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Place of Death	Frequency	Percent
ICU	22	91.6
Emergency Department	2	8.4
SUM	24	100

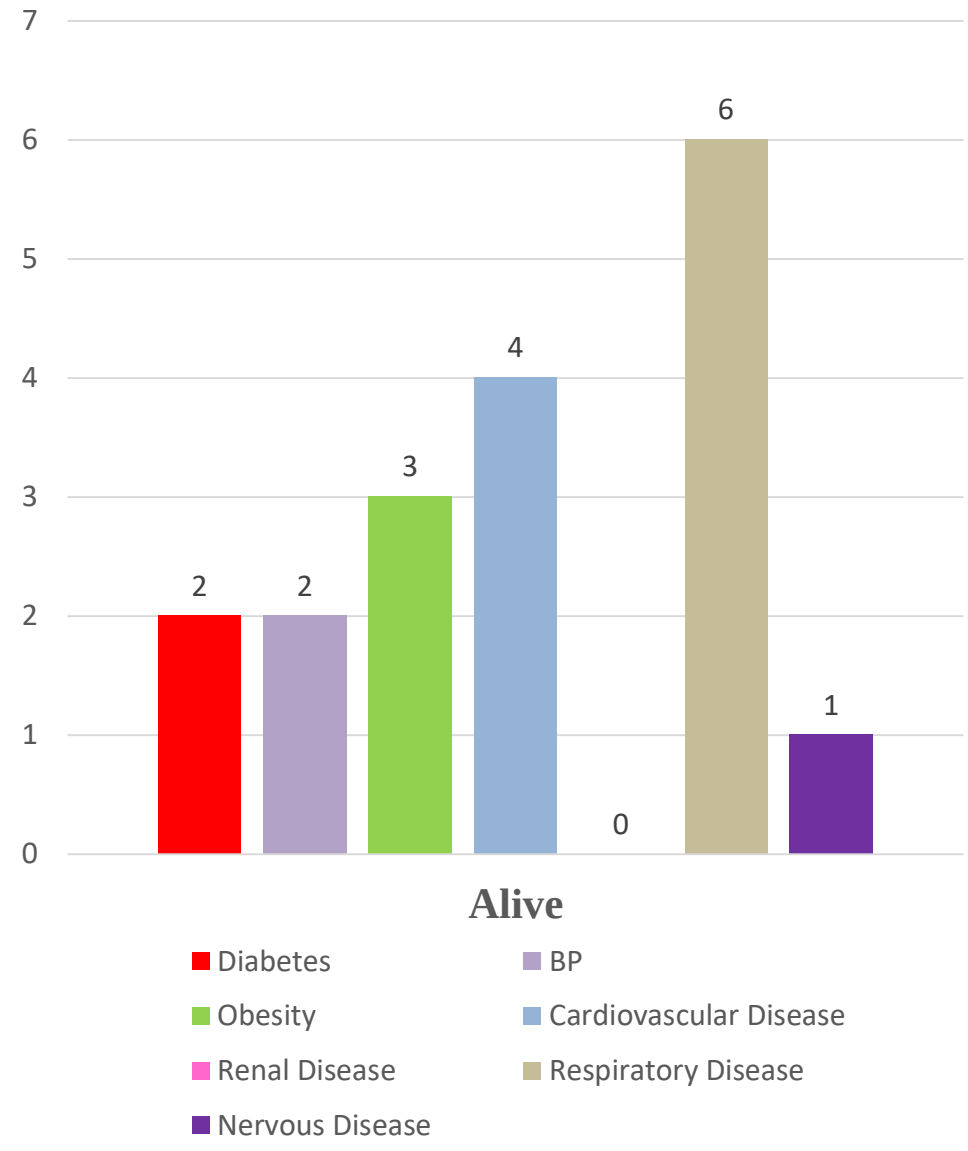


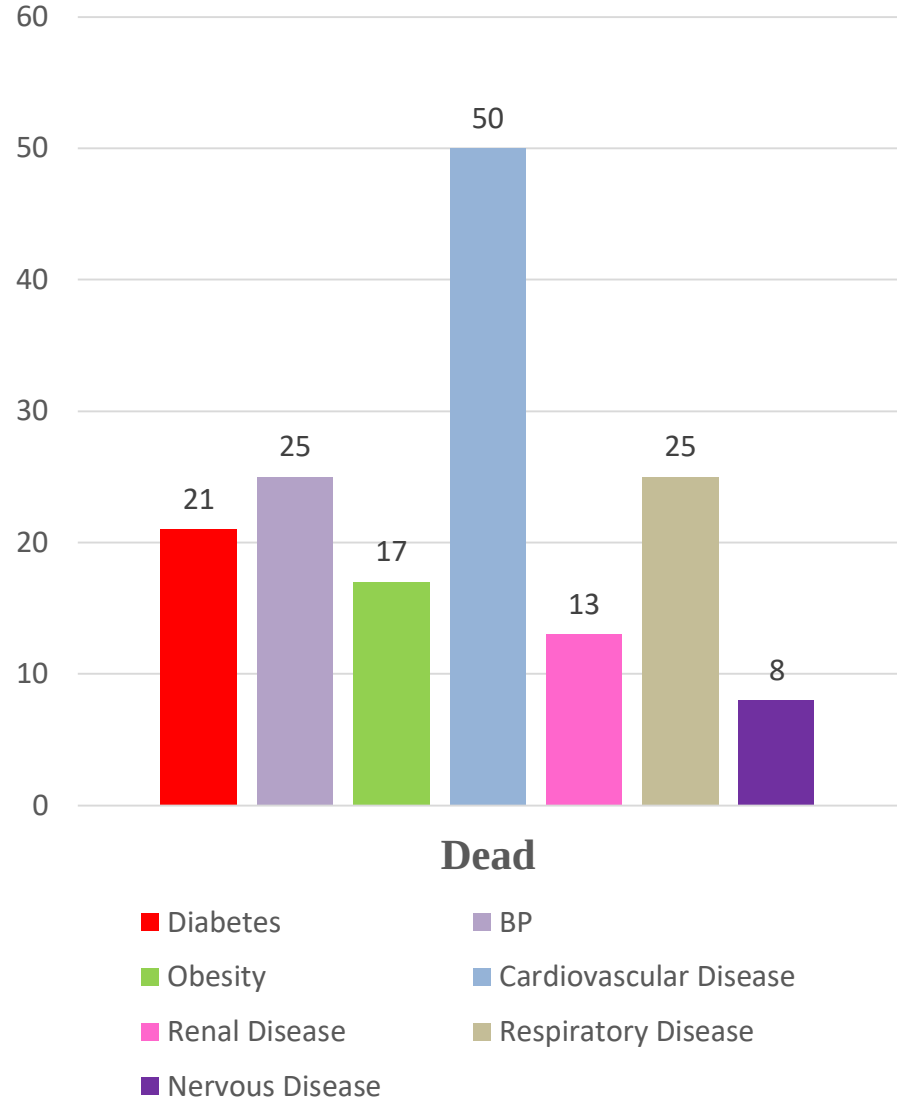
Risk Factor of Death in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Risk Factors (Frequency)	Diabetes	BP	Obesity	Cardiovascular disease	Renal Disease	Respiratory Disease	Nervous Disease
Alive (100 Persons)	2	2	3	4	0	6	1
Died (24 Persons)	5	6	4	12	3	6	2

Risk Factors (Percent)	Diabetes	BP	Obesity	Cardiovascular disease	Renal Disease	Respiratory Disease	Nervous Disease
Alive (100 Persons)	2	2	3	4	0	6	1
Died (24 Persons)	21	25	17	50	13	25	8
Sum		10					

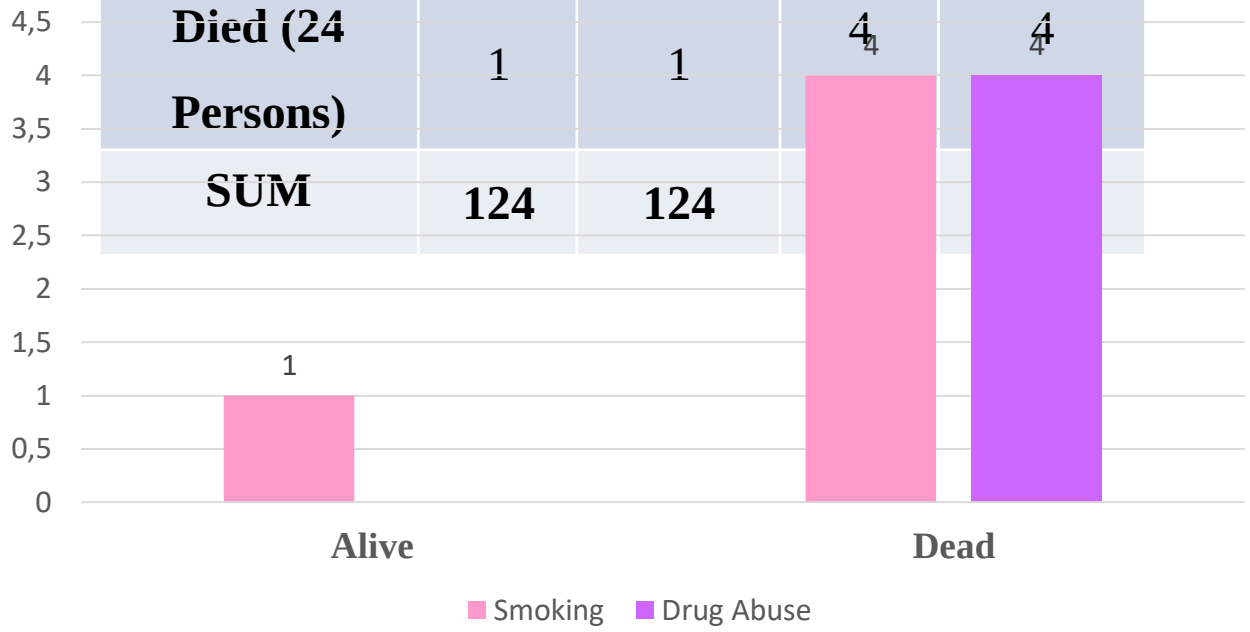
Risk Factor on Death in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016





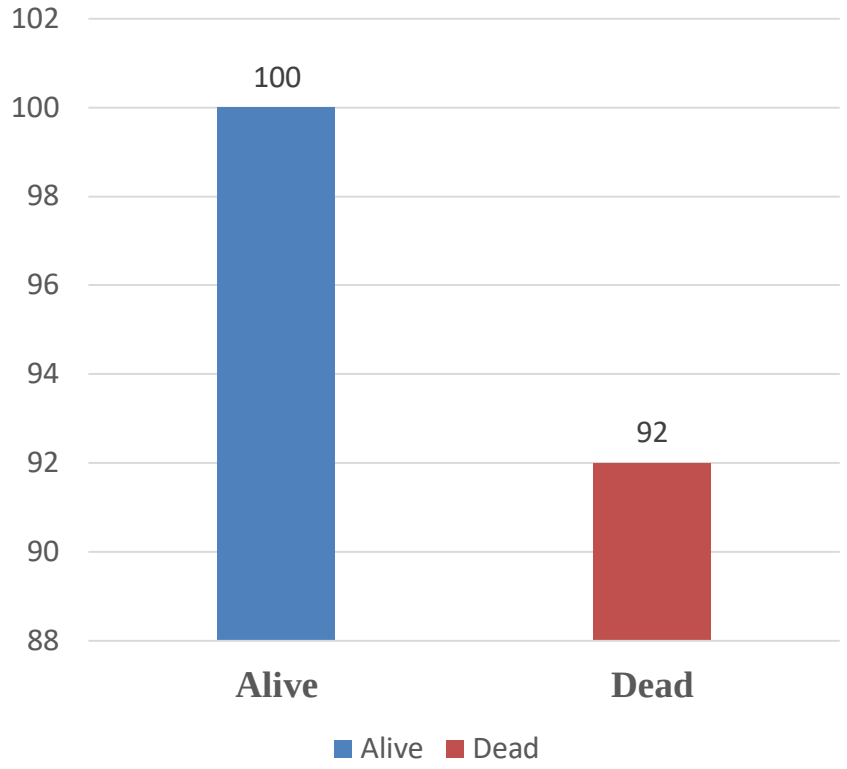
Effect of Smoking & Drug Abuse in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Risk Factors	Frequency		Percent	
	Smoking	Drug Abuse	Smoking	Drug Abuse
Alive (100 Persons)	1	0	1	0
Died (24 Persons)	1	1	4	4
SUM	**124**	**124**		



Use of Oseltamivir in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Population	Frequency Oseltamivir	Percent Oseltamivir
Alive (100 Persons)	100	100
Died (24 Persons)	22	92
SUM	**124**	**100**



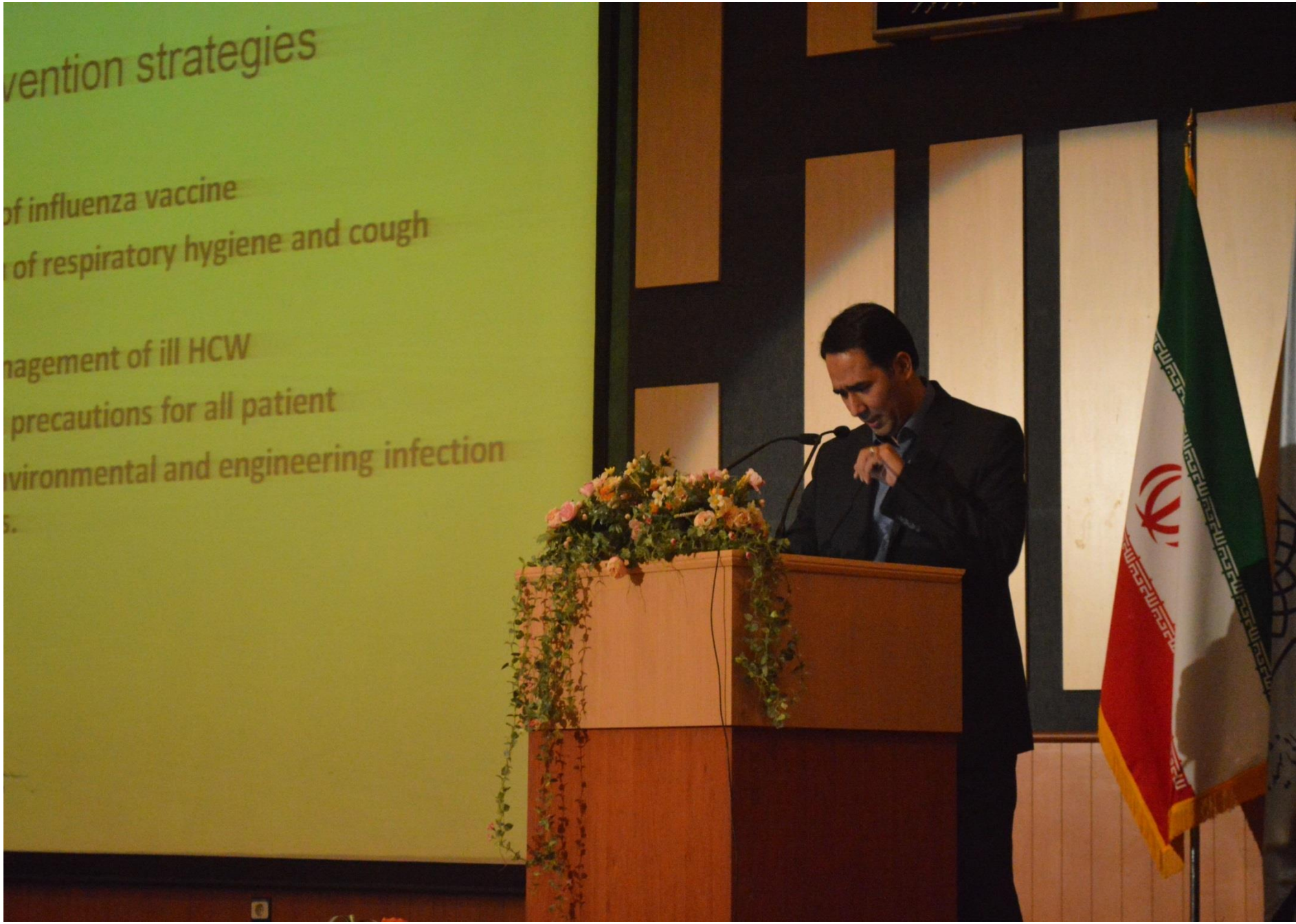
Antibiotics used in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

Antibiotics Administrated during Hospitalization	Ciprofloxacine	Ceftazidime	Clindamycine	Ceftriaxone	Azitromycin	Vancomycin	Meropnem	Levofloxacin	Colistin
Alive (100 Persons)	16	-	-	89	80	22	19	21	-
Died (24 Persons)	7	2	5	24	10	22	22	-	1

Distribution of Provinces in Pregnant Women with SARI Referred to Health Centers Iran 2015-2016

District		Frequency
Kerman	Sirjan	1
	Rafsanjan	1
	Kerman	2
Sistan & Baloochestan	Chabahar	1
	Zabol	1
	Zahedan	2
Golestan	Gonbad-e-Kavos	1
	Gorgan	2
Tehran	Tehran	1
	Varamin	1

District		Frequency
Isfahan	Ardestan	1
	Isfahan	1
Khorasan	Birjand	1
	Kashmar	1
	Neyshabour	1
	Mashhad	2
Mazandaran	Babol	1
Khozestan	Khoramshahr	1
Kordestan	Sanandaj	1


vention strategies
of influenza vaccine
of respiratory hygiene and cough
nagement of ill HCW
precautions for all patient
vironmental and engineering infection


MERS
SARS

Recent Activity

Dr M. Ghasemi:

Proposal Of Vaccination In High Risk Elderly Patients

Why Are Elderly Patients at Risk?

- Ages ≥ **65** years old considered to be in this category
- Worldwide, influenza virus infection is associated with serious **adverse events** leading to **hospitalization, debilitating complications**, and **death** in **elderly individuals**.

Why Are Elderly Patients at Risk?

- In contrast to efforts made to increase awareness about benefits of this vaccination :

  Rates of hospitalization for **acute respiratory illness** and **cardiovascular diseases** have been **increasing** in this population during recent annual **influenza seasons**

How a Healthcare Professional May Approach ?

I. Greater understanding of how **age-related changes** and their interaction with common **chronic comorbid conditions** and **Influenza** could be **life threatening** for elderly patients

II. Learn about high risk conditions

- **Cardiovascular conditions** (High blood pressure, high blood cholesterol, any surgery or treatment background)
- **Pulmonary diseases** (COPD, Asthma)
- **Cancer diseases**

How a Healthcare Professional May Approach ?

III. **Informing** & **Advising** this population to get the vaccination

- During their regular visit
- In hospitals
- In other health-related institutes

Patient Education

- Explaining patients how vaccination may **save their lives**
- Answering their questions and concerns with **patience**
- Specifying a **responsible person** to explain about vaccination in the **healthcare bodies** or **physician's office** in **influenza seasons**

Getting Further Help

- By holding regular meetings with **thought leaders and decision makers**
- Demonstrating how absence of vaccination can **affect public health** and **force costs** to governments and people (by the help of statistics, scientific facts, etc)
- Emphasizing that the negative effects are not avoidable without **assigned budget**, **determination** and **attention** to the most vulnerable population

Thank You For Your Attention