

Introduction

The Influenza virus infection period in Mexico City, since the epidemic year in 2009, has been considered an important risk factor for the morbidity and mortality to the general population, implying a high cost in health care and associated to the laboral inability.

The epidemiological description of these periods, help us to know if with the time exist any relevant variation that can predict a different behavior of the season and could affect more to the risk population, justifying the changes in the vaccination campaigns.

Justification

In the study period was found an early increase of the cases with influenza virus infection compared to the previous year associated with saturation of the health services. So was decided to make a deep analysis to found if in this year existed a different risk factor associated to this season's behavior.

Objective

General objective: Describe the epidemiological characteristics of the influenza virus season in the first four months of 2016.
Secondary objective: Analyze if there is a different risk factor in the study period.

Methodology

Is a prospective and analitical study from January to April, 2016.
Inclusion criteria: any age patients with inhospital management for influenza virus infection in a private third level hospital in Mexico City.
Statistical analysis: descriptive statistics frequencies and calculation of odds ratios for risk factors.

Results

In the study period from January 1 to April 30, were done 1711 molecular tests for suspected cases of influenza virus infection. 1264 (73%) were postive and 224 (17.7%) required inhospital management.

Figure 1. Frequency distribution of Influenza virus types in patients who required inhospital management

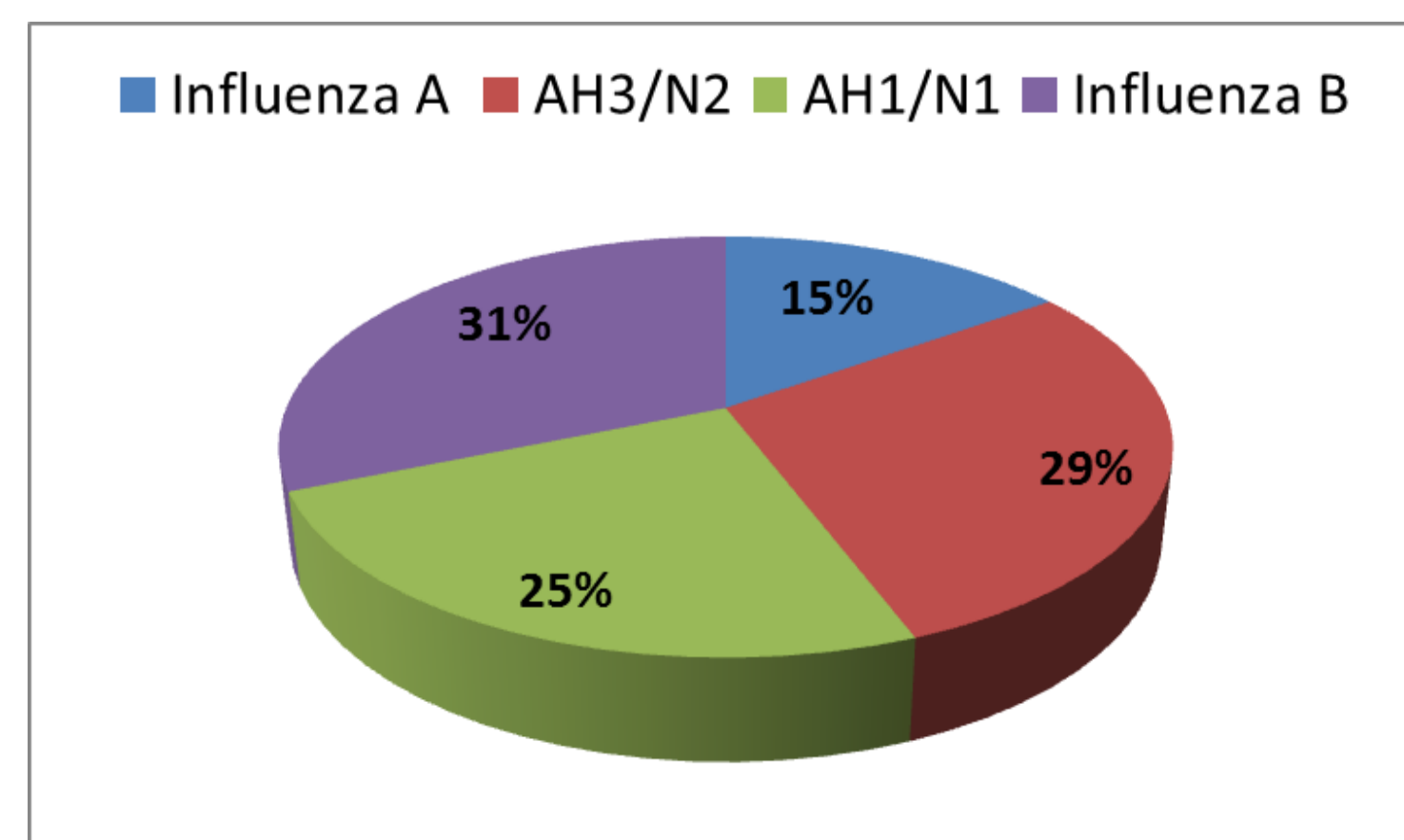
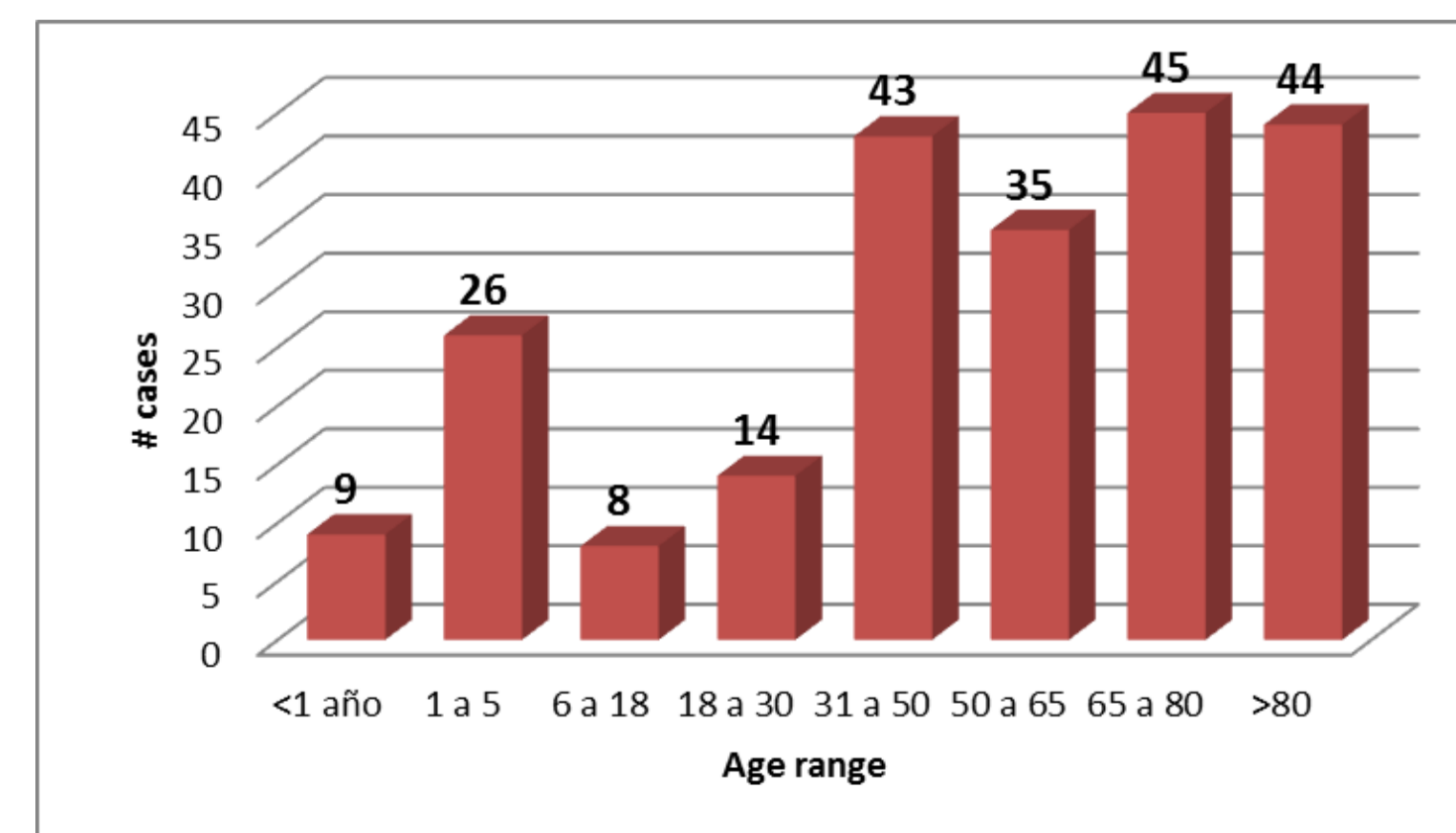


Table 1. Baseline characteristics of patients with Influenza virus infection who required inhospital management.

Variable	N = 224	% o Min-Max
Male Sex	104	46.4%
Age (Mean)	60.8	Min 4 meses Max 96 años
Days (Mean)		
• Begining of symptoms to ask for health care	3.4	Min 0 – Max 23
• Begining of symptoms to diagnosis	3.7	
• Days of hospitalization	11.01	Min 1 – Max 54
Symptoms		
• Fever	153	68.3%
• Cough	153	68.3%
• Odinofagia	39	17.4%
• Dyspnoea	91	40.6%
• Child irritability	10	4.5%
Complications		
• Pneumonia	11	4.9%
• ICU management	13	5.8%
• Mean days in ICU	13	Min 1 Max 38
• Deaths	11	4.9%
Risk factors		
• Pregnancy	8	3.6%
• Diabetes Mellitus 2	23	10.3%
• Cardiopulmonary diseases	84	37.5%
• Cancer	18	8%
• HIV	2	0.9%
• BMI (Mean)	25.5	Min 15 Max 46
• Overweight	73	32.6%
• Obesity	29	12.9%
• NO vaccination for season 2015-2016	186	83%

Figure 2. Distribution of cases by age



Bibliography:
www.cdc.gov/flu/
www.epidemiologia.salud.gob.mx

Figure 3. Weekly distribution graphic of cases in the first four months by types of Influenza virus

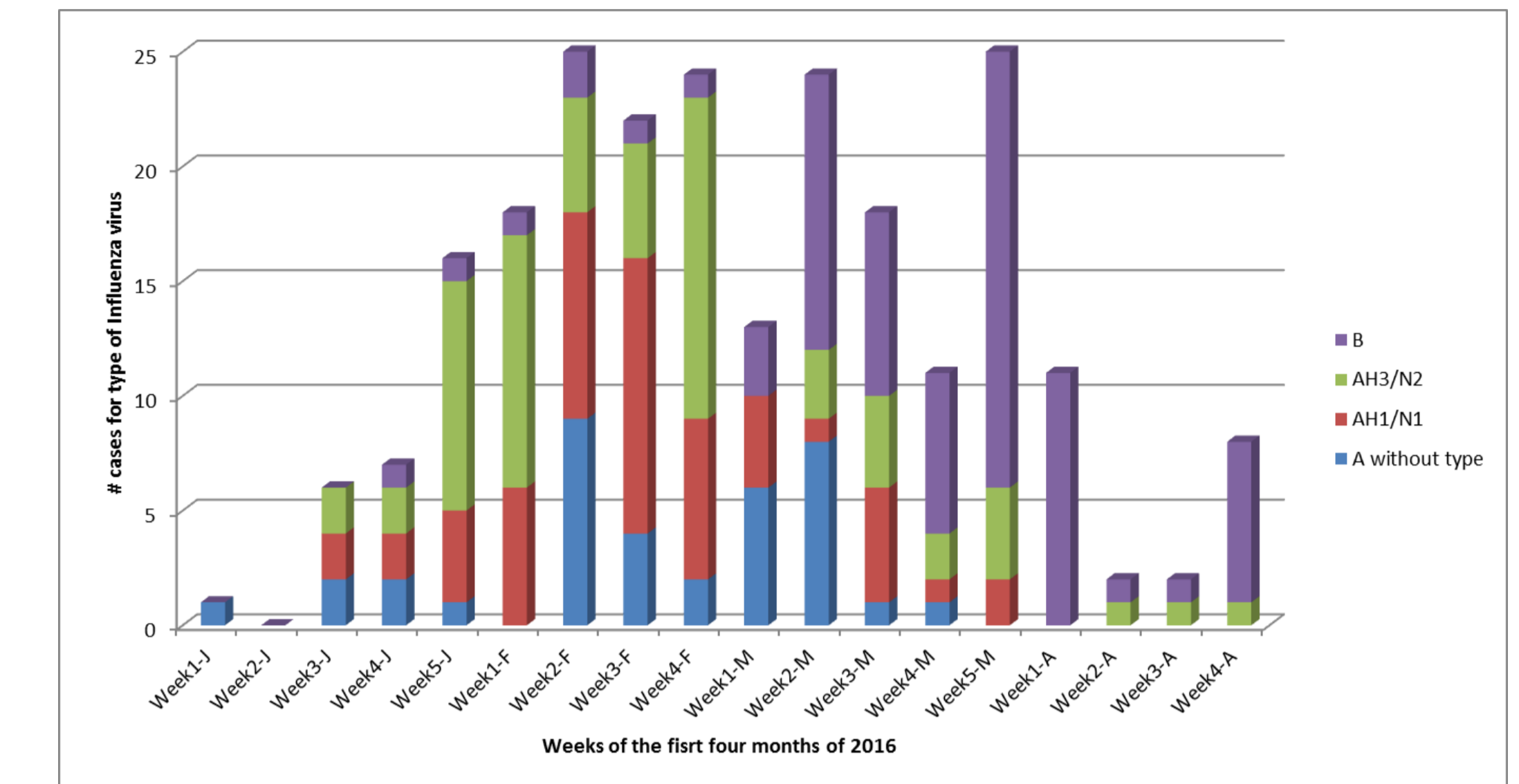


Table 2. Mortality risk factor analysis.

Risk variable for mortality	N=11	OR	X ² Fisher	P
DM2	1	0.86	0.017	> 0.05
Cardiopulmonary	6	2.07	1.43	> 0.05
Overweight/Obesity	5	0.99	0.0003	> 0.05
ICU	8	110.9	94.7	< 0.05
>65 years	8	4.34	5.25	< 0.05
Pneumonia	11	26.7	20	< 0.05
Influenza A	9	2.11	0.91	> 0.05
AH1NI	3	1.16	0.046	> 0.05
AH3N2	3	0.91	0.017	> 0.05
Influenza B	3	0.47	0.91	> 0.05

Table 3. ICU risk factor analysis.

Risk variable for ICU	N=13	OR	X ² Fisher	P
DM 2	4	4.5	6.29	< 0.05
Cardiopulmonary	4	0.72	0.266	> 0.05
Overweight/Obesity	9	5.8	6.14	< 0.05
>65 years	9	3.68	5.01	< 0.05
Pneumonia	13	25.20	188.9	< 0.05
Influenza A	10	1.55	0.42	> 0.05
AH1NI	3	0.91	0.016	> 0.05
AH3N2	4	1.09	0.02	> 0.05
Influenza B	3	0.644	0.42	> 0.05
Mean days for diagnosis	6.07			

Discussion

- Was found that even with the intensive sensitization campaigns, the patients still take 3 days to ask for medical care, wich determines greater complications.
- It is alarmig the low rate of vaccination in the study population, and also was found that 90% of the ones who had the vaccine were infected with the Influenza virus type AH3/N2 or B.
- In the patients who had any complication the mean days to ask for medical care were between 4 to 6 days compare with the 3 days of the patients without complication.
- In this study group the principal symptom was fever and cough. And the 30% of patients with complications had any cardiopulmonary disease at baseline.

We conclude that it is a very important task to continue the sensitization of the general population all the year but specially in the begining of the Influenza season with vaccination and with precautionary measures to decrease the spread, because 90% of the patients who requires inhospital management admitt to have a close contact with someone previously infected. Also we found an increase in the number of cases infected with influenza AH3/N2 virus type and we saw a peak in the month of february compared with previous years; simily with the national report of the Epidemiology General Direction.