

## Introduction

Flu is an acute infectious respiratory disease responsible for outbreaks annually affecting 5-20% of the population<sup>1</sup>;

The administration of vaccines is recommended as a preventive measure to avoid complications in susceptible individuals, such as the elderly, diabetic and asthmatic, to name a few. The recognition of the **pharmacist's role** in this context led to the inclusion of the service in the law (2007) and its classification as an advanced service extending the concept of **pharmaceutical care**<sup>2</sup>.

## Objectives

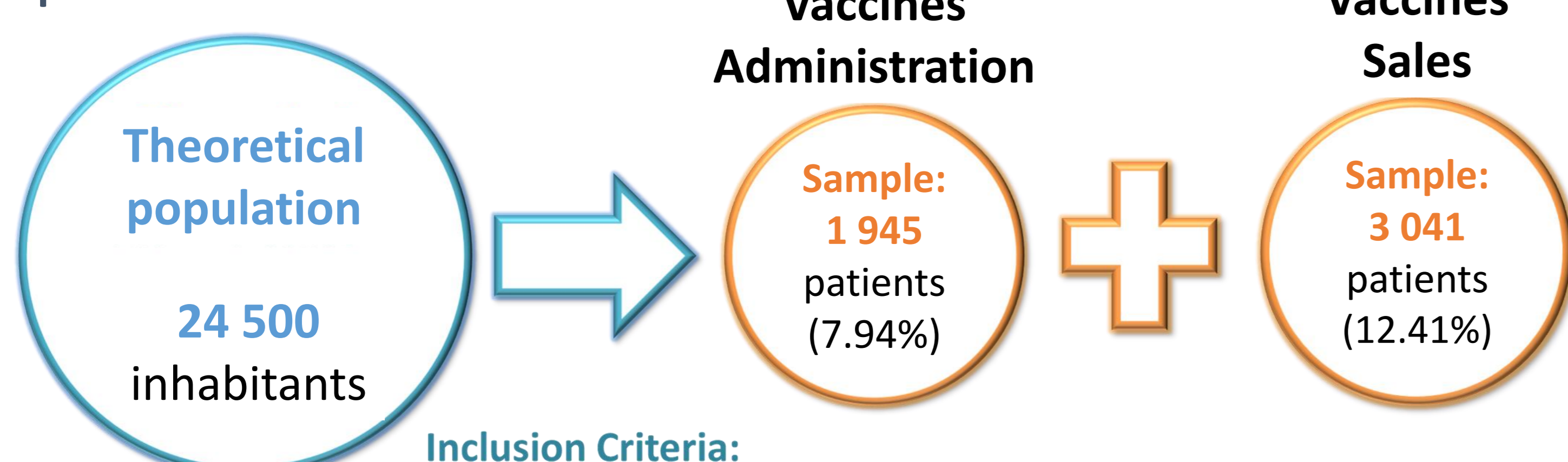
To estimate the **seasonal flu vaccine coverage** in the population served by an urban pharmacy (and to characterize the evolution) and the **proportion of the population** resorting to vaccination against influenza using the pharmacy service.

## Methods

### Study Design and period of data collection:

- An **observational retrospective study** was conducted from 2009 until November of 2014, in an urban pharmacy located in Lisbon (Portugal).

### Sample considerations:



### Inclusion Criteria:

- All patients that:
- resorted to the pharmacy, in the study period, to purchase the influenza vaccine and/or to have it administered.

### Data collection:

- Data on sales of influenza vaccines and their respective administration were collected through paper records (2008/2009) and computer records (2009/2010 to 2014/2015);
- The flu season was considered to last 24 week, from the beginning of October until the end of March<sup>3</sup>;
- Relatively to sales, the total number of influenza vaccines sold in each flu season was collected, regardless of the brand;
- From the administration records was possible the **socio-demographic characterization of the sample** (gender and age) and their **categorization in elderly** ( $\geq 65$  years old) vs. adult ( $< 65$  years old).

### Ethics:

The technical director of this pharmacy sign a consent form authorizing the data collection by the research team and all information was treated anonymously.

### Data analysis:

Data was analyzed using univariate statistics (scalar and categorical variables) in IBM SPSS v.22.0.

## Results

### Data on Influenza Vaccines Sales:

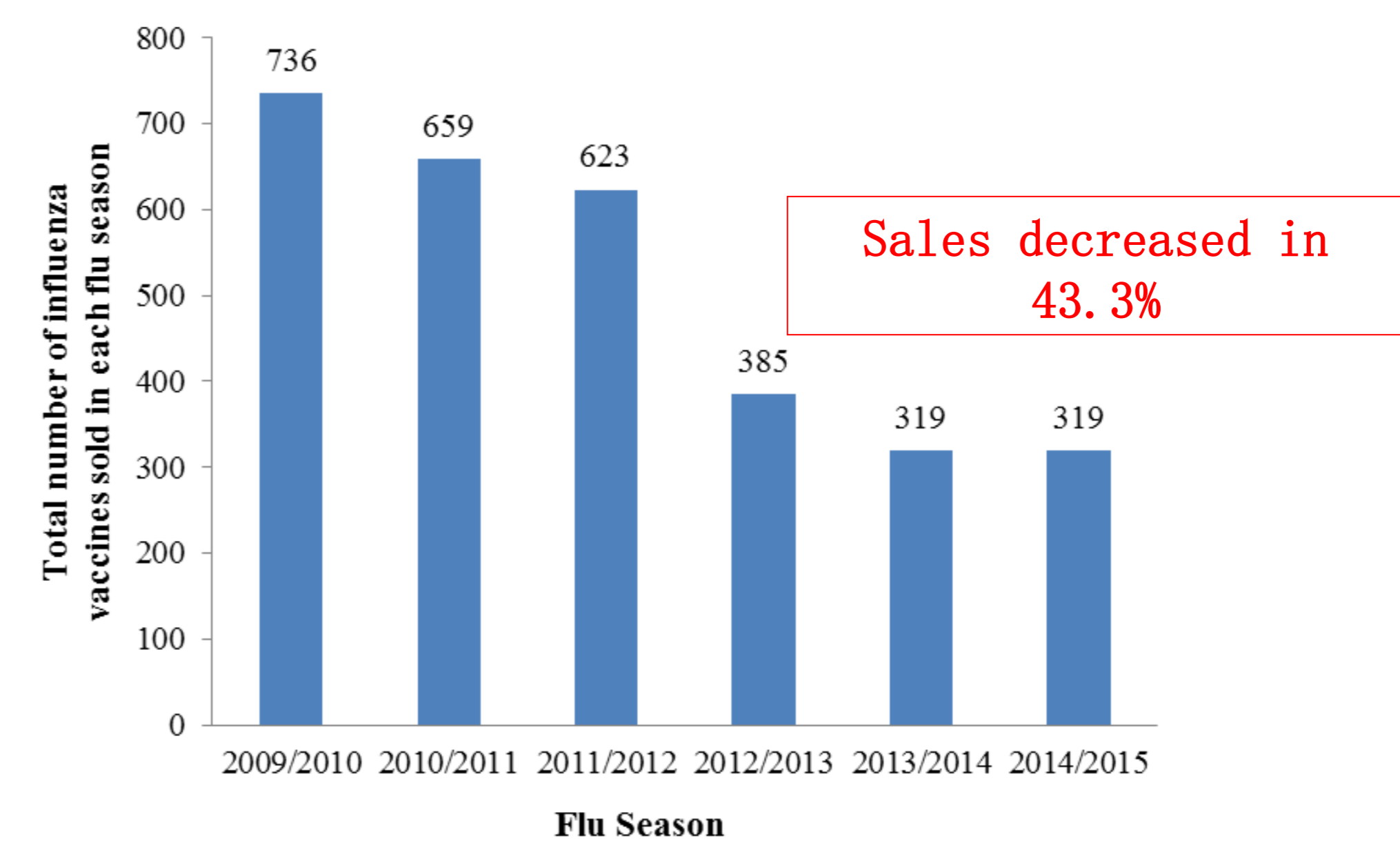


Figure 1 - Flu vaccines sales from 2009/2010 till 2014/2015

### Data on Influenza Vaccines Administration:

- The majority of patients who had their vaccine administered in the pharmacy were **female (n = 1134; 58.3%)** and the mean age was **66.4 years old (SD = 17.8)**.

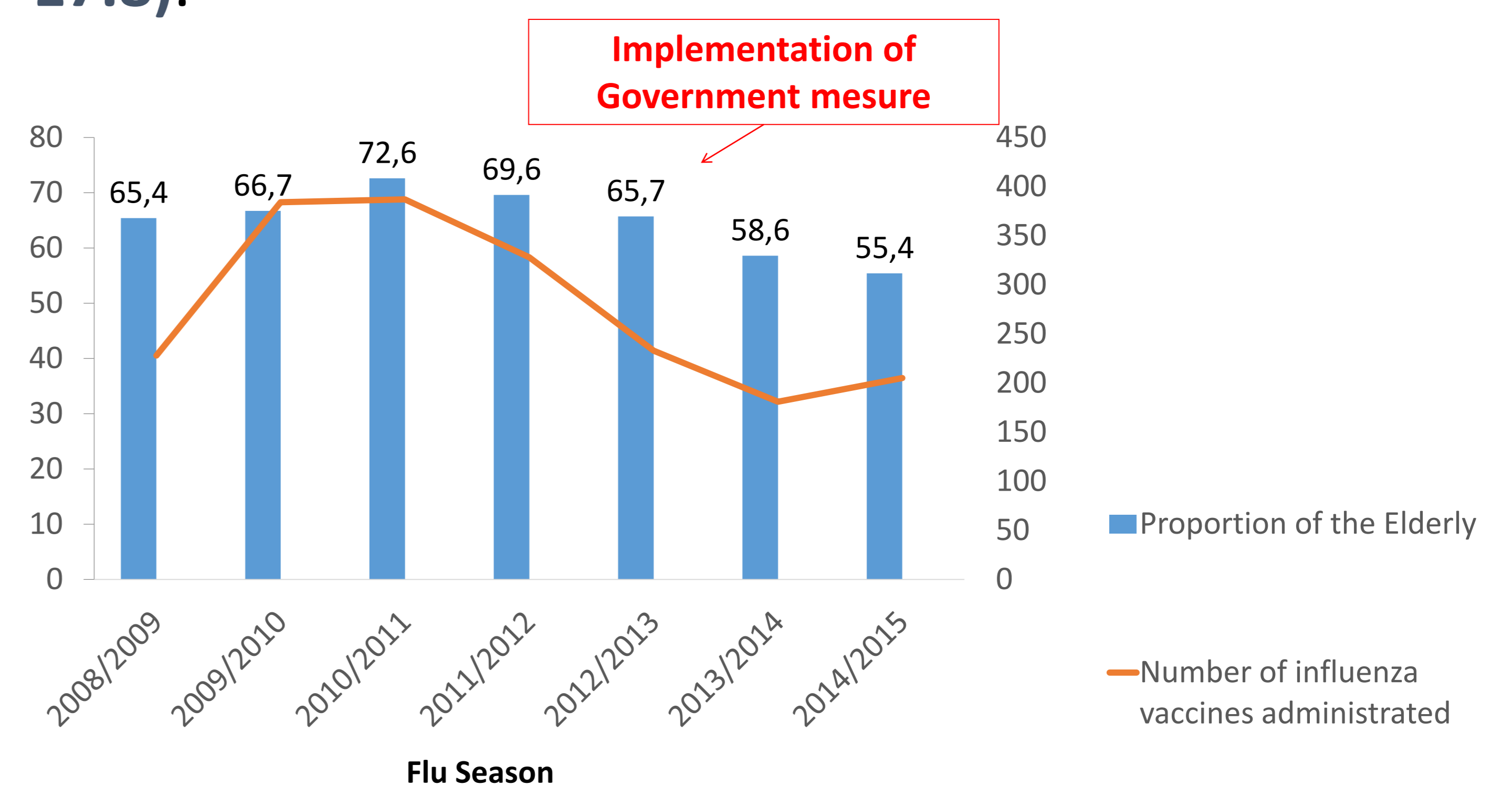


Figure 2 - Proportion of Elderly Vs Influenza vaccines administration in each flu season

## Discussion/Conclusions

It was observed a **substantial decrease** in the influenza vaccines sales and in the demand for vaccine administration, in this pharmacy, from the season of 2011/2012 to 2012/2013. This was largely explained by the **decreased of the proportion of the elderly** resorting to the pharmacy. This maybe due to the governmental measures imposed in 2012/2013, that allow free vaccination (no need for vaccine prescription) in Health Centers, for the risk groups (e.g. elderly, patients with chronic conditions as asthma, renal failure)<sup>4</sup>.

Prior to vaccine administration, the pharmacist is **compelled to create a clinical record** enabling the collection of pharmacotherapeutic profile and medical history. This will create an opportunity for the detection of patients who can benefit for additional enhanced services.

In the current flu season, this pharmacy has increased the **number of pharmacists with specific training for vaccines administration** and implemented a more extensive schedule of administration in order to make this pharmaceutical service more accessible and an increased of 13.3% was already observed. In the future, this governmental measure can be a barrier to this service as they affect the equity of care.

## References