

# GENDER DIFFERENCES IN CARDIOVASCULAR THERAPIES DISPENSED FROM A LOCAL SOCIAL SERVICE AGENCY OF VENETO REGION

Julia Daragjati<sup>1</sup>, U. Galli<sup>2</sup>, M. Bushati<sup>3</sup>, AM. Grion<sup>4</sup>, RM Gaion<sup>5</sup>

<sup>1</sup> Università degli Studi di Padova Dipartimento Interaziendale per l'Assistenza Farmaceutica, Azienda Ospedaliera – Azienda ulss 16 Email:julia.daragjati@studenti.unipd.it

<sup>2</sup>Università degli Studi di Padova Dipartimento Interaziendale per l'Assistenza Farmaceutica, Azienda Ospedaliera – Azienda ulss 16 Email:xxxx@xxxx

<sup>3</sup>Università degli Studi di Padova Dipartimento Interaziendale per l'Assistenza Farmaceutica, Azienda Ospedaliera – Azienda ulss 16 Email:xxxx@xxxx

<sup>4</sup>Università degli Studi di Padova Dipartimento Interaziendale per l'Assistenza Farmaceutica, Azienda Ospedaliera – Azienda ulss 16 Email:xxx@xxxx

<sup>5</sup>Università degli Studi di Padova Dipartimento Interaziendale per l'Assistenza Farmaceutica, Azienda Ospedaliera – Azienda ulss 16 Email:xxxx@xxxx

## Abstract

**Introduction:** Significant physiological differences between men and women exist, regarding every organ and apparatus, including cardio-vascular system, nervous system and immune system. These differences affect drug absorption, distribution, metabolism, excretion and finally efficacy and safety. Patients' medication use and adherence to therapy have not been broadly translated into sex/gender characterisation. Poor adherence to therapies and clinical guidelines are known to be widespread and influenced by many factors. **Objectives:** In this study we investigated sex-related differences in the use of cardiovascular medications and the adherence to therapies, utilizing records of prescriptions chargeable to the Local Health Service of the assisted population. **Material and Methods:** The study included all residents [491261 (255026 females and 236235 males, population of ULSS 16)] of the Local Health Area 16 of the Veneto Region, and all medications dispensed in the period 1<sup>st</sup> January until 31<sup>st</sup> of December 2012 were analysed. The population was subdivided into 4 age groups: 15-44, 45-64, 65-79 and over 80 years of age. The ATC groups A (Antidiabetics), B (Antithrombotic agents) and C (Cardiovascular agents) were considered. Results were expressed as odds ratios of prescriptions dispensed to males *versus* females with 95% confidence intervals, based on the number of individuals that received at least one medication. The adherence was measured using Defined Daily Doses per inhabitant exposed to a given drug per year, which allows an estimate of the number of days for which each patient was treated annually.

**Results:** Males were more likely to receive prescriptions for cardiovascular medications, such as beta-blockers (OR=1.15 95% CI 1.10-1.20), ACE-inhibitors (OR=1.25 95% CI 1.20-1.30), antithrombotic agents (OR 1.16 95% CI 1.14-1.20), and also more treated with antidiabetic drugs: insulin therapy (OR=1.24 95% CI 1.21-1.30) and with oral hypoglycaemics (OR=1.37 95% CI 1.33-1.40). Females were more exposed to diuretics (OR=0.72, 95% CI 0.66-0.80). A larger gender difference was noticed between 15-44 years old males and females and this difference decreased with aging, still remaining statistically significant. Results show that in general men were more likely to be adherent as compared to their women counterparts. Differences in adherence were more pronounced among patients under 80 years of age. Young women were less adherent than the older ones.

**Conclusions:** *Our findings indicate that in general, males are more likely than females to be treated with cardiovascular drugs. Moreover, females are less likely to be adherent to their medications.*