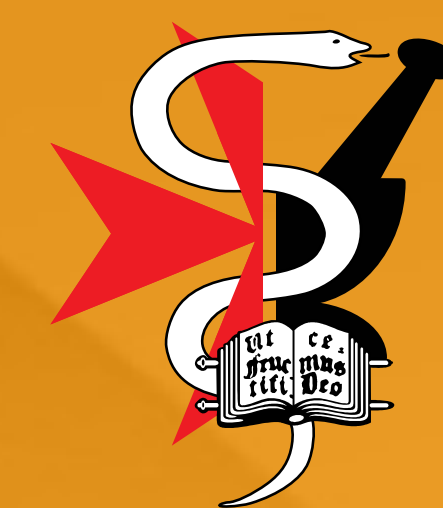
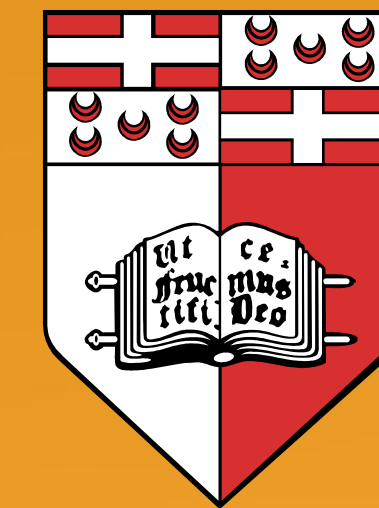


# Cardiovascular Medicines: Comparative Costs and Benefits

Mark Cardona, John Vella, Maurice Zarb Adami, Lilian M. Azzopardi, Anthony Serracino-Inglott  
Department of Pharmacy, Faculty of Medicine and Surgery, University of Malta, Msida, Malta  
email: mcar0046@um.edu.mt



Department of Pharmacy



University of Malta

## INTRODUCTION

An increase in global life expectancy and a concomitant shift in population demographics is leading to a greater incidence of non-communicable disease, with cardiovascular (CVA) morbidity being the primary cause of death worldwide. In 2010, 17.3 million deaths and €863 million in healthcare interventions were attributed to CVA disease at a global level. With the same trends exhibiting themselves locally, consideration of the cost of treatment and financial factors was a topical issue.

## AIMS

- Obtain the costs of all cardiovascular drugs found in the local private retail community setting
- Analyse the prices of generic and proprietary products and derive a relationship
- Observe the effect of a price differential for equivalent products to their sales volume over time

## METHOD

### Obtaining the cost of cardiovascular drugs

A list of authorised medicinal products available in the community setting was obtained from the Malta Medicines Authority website, with the cut-off date for product inclusion in the study being December 2012. Originator and generic products were differentiated by reviewing product dossiers and utilising anecdotal evidence from community pharmacists.

### Price Comparison

When comparing prices, the Defined Daily Dose (DDD) as established by the World Health Organisation was chosen as the unit of comparison. The cost per DDD of each active pharmaceutical ingredient was then calculated and data analysed utilising SPSS Version 19 statistical package.

### Effect of Price on Cardiovascular Drug Sales

Data was drawn from the Electronic Point of Sale records of two community pharmacies for a period of four years, 2009 to 2012. Sales volumes of drugs were analysed with respect to market price and number of generic variants.

## RESULTS

- 162 cardiovascular medicines were included in this study (108 originators and 54 generic drugs).
- Generic penetration (33%) is very low in comparison to other EU member states.
- A large number of drugs did not have a generic alternative available in the community setting.
- The mean discount of generic variants compared to originator drugs is only 38%. In the case of certain active ingredients, progress was observed upon the entry of multiple variants.
- Statistical forecasting generated a possible discount range of between 26.3% and 49.8%.

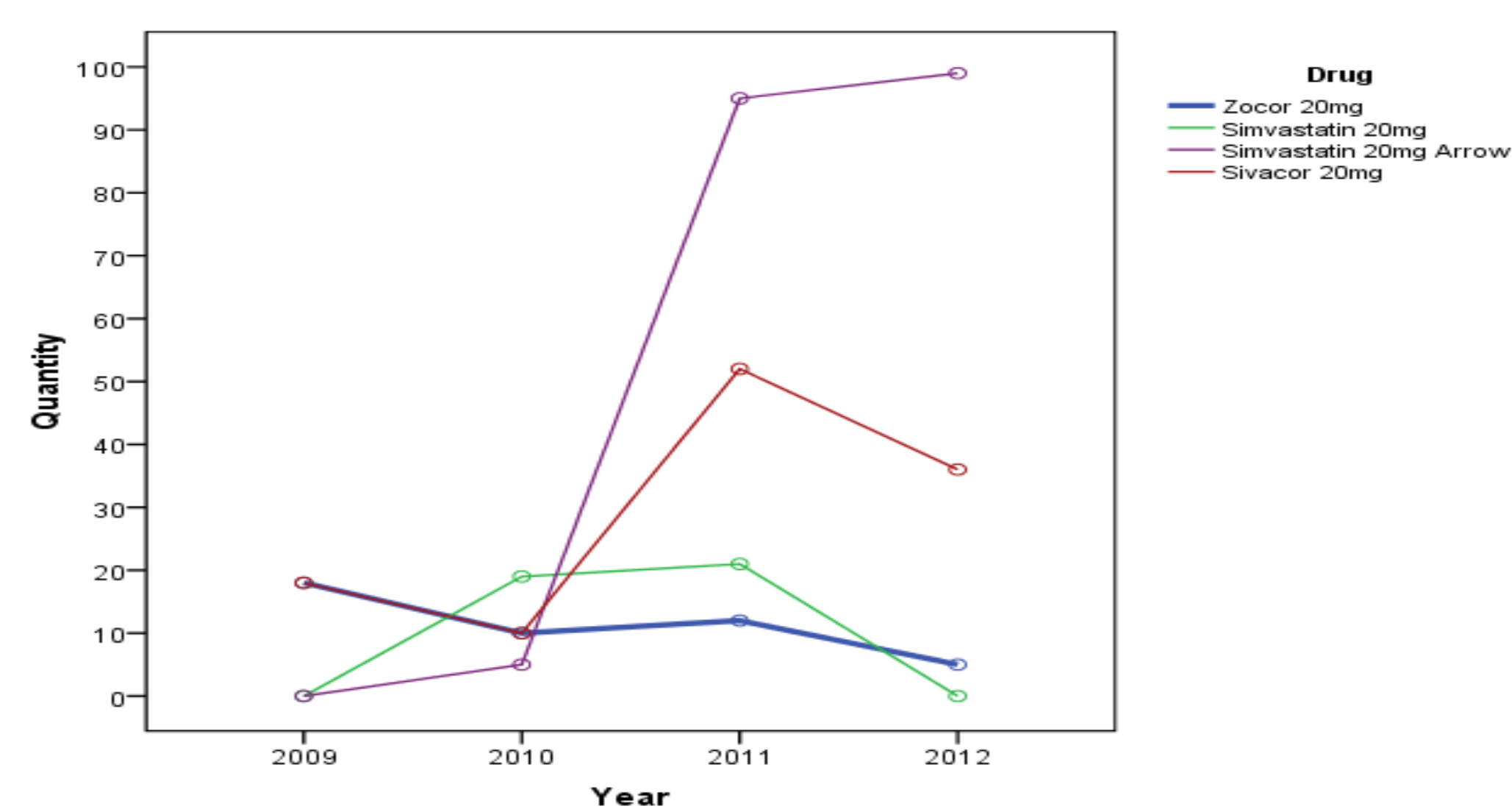


Figure 1: Drug Sales of Simvastatin 20mg (2009-2012)

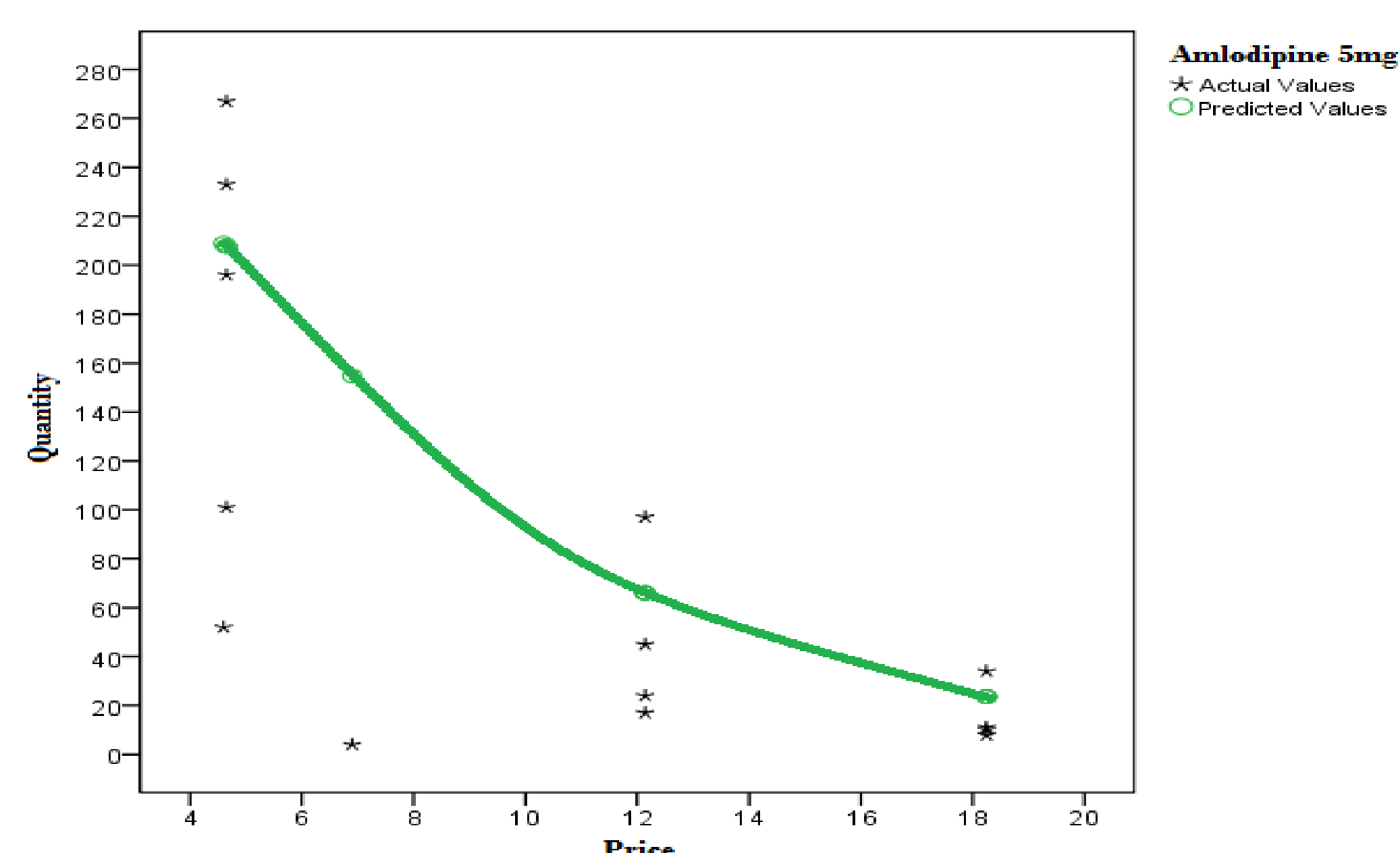


Figure 2: Predicted Sales of Amlodipine 5mg in Relation to Price

## CONCLUSION

The market for generic products in Malta is still underdeveloped and has not yet attained maturity and price equilibrium. More generics should result in lower prices, better access, and by default healthier citizens. This in turn will reduce the burden on the state pharmaceutical supply system. The average discount from originator to generic is not yet at levels comparable to those in other EU markets. The absence of a stipulated discount off the branded product is an issue which could be broached in an effort to decrease prices of cardiovascular drugs. This practice is adopted in certain EU countries.

**Reference** 1. Bloom DE, Cafiero ET, Jané-Llopis E, Abrahams-Gessel S, Bloom LR, Fathima S, et al. The Global Economic Burden of Noncommunicable Diseases. World Economic Forum and the Harvard School of Public Health; 2012.