**PP060—PATENTED DRUG EXTENSION STRATEGIES AND HOSPITAL RESTRICTIVE DRUG FORMULARY: A COST-EVALUATION ANALYSIS**

N. Vernaz^1; G. Haller^2; F. Girardin^1; B. Hutner^1; C. Combescure^2; P. Dayer^3; D. Musciconi^2; J.-L. Salomon^2; and P. Bonnabry^1

^1Pharmacy, Geneva University Hospitals, University of Geneva, University of Lausanne; ^2Department of Anesthesiology, Pharmacology, Intensive Care, Division of Clinical Epidemiology, Department of Epidemiology & Preventive Medicine, Health Services Management and Research, Geneva University Hospitals, University of Geneva, Monash University, Melbourne Australia; ^3Clinical psychopharmacology Unit, Service of clinical pharmacy and toxicology, Geneva University Hospitals; ^4Infection Control Program, Geneva University Hospitals and Faculty of Medicine; ^5CRC & Division of clinical-epidemiology, Department of Health and Community Medicine, University of Geneva, Geneva University Hospitals; and ^6OFAC, Geneva, Switzerland

**Introduction:** Drug manufacturers developed “evergreening strategies” to compete with generic medication after patent termination. These include marketing of slightly modified follow-on drugs (slow-release formulations, single isomer chiral molecules, active metabolites, or structural analogues/combinations of original patented drugs) and offering high rebates to hospitals that use brand-name or evergreening drugs. The Geneva University Hospitals (HUG) and the Geneva community have different rules indeed. Drug prices are negotiated and prescriptions restricted at HUG, while prices are fixed and prescriptions unrestricted in the community. We examine the impact of listing these drugs in the hospital-restrictive drug formulary (RDF) on the health care system as a whole (“spillover effect”).

**Patients (or Materials) and Methods:** We linked hospital and community pharmacy invoice office data in the Swiss canton of Geneva to calculate utilization of 8 follow-on drugs in defined daily doses between 2000 and 2008. This database includes >73% of the total of insured patients. To examine the financial spillover effect, we calculated a monthly follow-on drug market share in DDDs for medical device and drug combinations, new pharmaceutical formulations routinely require a team of clinicians and natural scientists to perform jointly the complex tasks of the early learning phase of clinical medicines development. Beside profound knowledge in their primary clinical specialty, the new generation of clinical pharmacologists needs extensive additional training in the new methodologies of drug discovery, molecular biology, immunology, translational medicine, etc. for efficiently functioning in a multidisciplinary team.

**Conclusion:** At the Semmelweis University, the teaching of a reorganized postgraduate training plan for clinical pharmacologists was initiated applying the principles outlined above. On the basis of our experience, an outline for a new national curriculum of clinical pharmacology has been developed, which will be presented. The new plan takes over several topics and concepts worked out during the harmonization of pharmaceutical medicine education in Europe by PharmaTrain. A certain overlap in pharmaceutical medicinal and clinical pharmacological curricula is desired, considering that the optimal clinical application of new types of medicines needs much more basic scientific knowledge than the use of traditional medicinal agents.

**Disclosure of Interest:** None declared.
PP061—RECENT REFORMS IN SCOTLAND TO TAKE ADVANTAGE OF GENERIC, THEIR INFLUENCE AND IMPLICATIONS FOR HEALTH AUTHORITIES CONTEMPLATING FUTURE REFORMS

B. Godman1,2, I. Bishop3, S. Campbell4, J. Miranda5, and M. Bennie1,3

1Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow, United Kingdom; 2Division of Clinical Pharmacology, Karolinska Institutet, Karolinska University Hospital, Stockholm, Sweden; 3Information Services Division, NHS National Services Scotland, Edinburgh; 4Health Sciences Research Group—Primary Care, University of Manchester, Manchester, United Kingdom; and 5Department of Healthcare Development, Public Healthcare Services Committee Administration, Stockholm County Council, Stockholm, Sweden

Introduction: There have been variable measures introduced in Scotland in recent years to take advantage of the availability of generics in high volume classes. Consequently, there is a need to assess their influence to provide guidance to authorities for the future.

Patients (or Materials) and Methods: A mixture of retrospective observational studies and interrupted time series analyses on subsequent drug utilization (DDDs [defined daily doses]) and expenditure of the various drugs in the different classes. Only administrative databases used. Demand-side measures recorded and categorized by 4Es (education, engineering, economics, and enforcement).

Results: (1) Multiple demand-side measures led to low-cost generic proton pump inhibitors (PPIs) driving the increase in utilization in recent years. PPI expenditure in 2010 was 56% below 2001 levels despite a 3-fold increase in utilization. The multiple measures saved

PP062—VARIABLE APPROACHES IN EUROPE TO THE AVAILABILITY OF GENERIC LOSARTAN: IMPLICATIONS FOR THE FUTURE

B. Godman1,2, M. Bennie1,3 A. Bucsics4, U. Hesse5, A. Martin6, J. Miranda7, S. Simoens8, C. Zara9, and L.L. Gustafsson2

1Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow, United Kingdom; 2Division of Clinical Pharmacology, Karolinska Institutet, Karolinska University Hospital, Stockholm, Sweden; 3Information Services Division, NHS National Services Scotland, Edinburgh; 4Health Sciences Research Group—Primary Care, University of Manchester, Manchester, United Kingdom; and 5Department of Healthcare Development, Public Healthcare Services Committee Administration, Stockholm County Council, Stockholm, Sweden; 6Department of Pharmaceutical and Pharmacological Sciences, KU Leuven, Leuven, Belgium; and 7Barcelona Health Region, Catalan Health Service, Barcelona, Spain

Introduction: Generic losartan has been available across Europe, providing opportunities for authorities to save costs as all angiotensin receptor blockers (ARBs) are seen as similar in treating hypertension and heart failure at appropriate doses. However, initiatives vary across Europe. Consequently, there is a need to assess changes in losartan utilization versus other ARBs alongside accompanying demand-side measures to provide future guidance.

Patients (or Materials) and Methods: Retrospective observational study using an interrupted time series design of patients dispensed at least 1 ARB in Austria, Belgium, Denmark, England (Bury PCT), Scotland, Spain (Catalonia), and Sweden up to 3 years before generic losartan was reimbursed and to up 3 years after. Defined daily doses and only administrative databases were used. Demand-side measures were recorded under the 4Es (education, engineering, economics, and enforcement). Prices for generic losartan were also recorded.

Results: There was appreciable variation in health authority activity. This ranged from delisting of all other ARBs from the reimbursement list in Denmark; easing of prescribing restrictions for losartan but not for other ARBs in Austria and Belgium; and formularies, incentive programs, and therapeutic switching in NHS Bury and Sweden, to no targeted activities in Spain or Scotland (due to other activities and other ARBs shortly losing their patents). Significant changes were seen in losartan utilization in Denmark (losartan 93% of total ARBs by study end), NHS Bury (losartan 65% of total ARBs by the end of the study). However, no change in losartan utilization postgeneric until active measures) and Sweden (losartan 40% of total ARBs).