Abstract
Background: In 1999, the Pharmacists Association of Gipuzkoa, a Spanish province with a population of 700,000, initiated a campaign to reduce the common practice in community pharmacies of dispensing antibiotics without prescription. Objective: The study was designed to assess the ongoing effectiveness of this program in reducing nonprescription dispensing of antibiotics.

Methods: In March 2009, 2 young women posed as simulated patients and visited each of the 280 operating community pharmacies in Gipuzkoa. In 139 of these pharmacies, randomly selected, the simulated patients feigned the symptoms of an uncomplicated urinary tract infection and requested an unspecified antibiotic. In the remaining 141, the actress requested a specific antibiotic, only describing her symptoms upon request by the dispensing staff. The rate of nonprescription dispensing had previously been estimated at 70.5% in 2000 and 42.2% in 2004. Univariate and multivariate analyses were performed, based on a number of variables related to the pharmacy and staff.

Results: In the current study, antibiotics were dispensed without prescription by 49 of 280 pharmacies (17.5%). The product- and symptom- based scenarios had similar rates of 16.3% and 18.7%, respectively. The only variables which appeared to affect the nonprescription dispensing rate were the gender of the dispenser, being males more likely to dispense (OR=3.135, 95%CI [1.286, 7.646]), and the number of previous antibiotic-awareness campaigns in which the pharmacy had participated (OR=1.057, 95% CI [1.008, 1.107]). The community population, its number of pharmacies, the years in business of each pharmacy, or its revenue, did not appear to influence the nonprescription dispensing rate.

Conclusion: A long-term multifactorial program set up by the pharmacists association of Gipuzkoa, Spain, appears to have been effective in reducing the rate at which antibiotics are dispensed without a prescription in community pharmacies.

Keywords
Anti-Bacterial Agents, Self Medication, Drug Utilization, Pharmacies, Professional Practice, Patient Simulation, Spain.