Title

Competition and efficiency in public procurement: a study on the Italian pharmaceutical market

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Topic of the paper: Evaluation of health policies

Background

In the last years there has been a huge increase in expenditure for medicines procured by health organisations: in 2001 and 2017 these medicines accounted for 20% and 57.5% of public pharmaceutical expenditure, respectively[1]. This tremendous change in the public spending mix for medicines is a the result of a world-wide trend, since most of the new drugs are launched into hospital settings, and an Italian-specific policy: many new drugs, that may ordinarily be acquired and distributed by the community pharmacies, are procured by health organisations and either directly distributed by these organisations or distributed by the community pharmacies on behalf of health organisations.

Despite this trend, the research on the effects of public procurement for drugs in Italy is quite limited. A recent report by the 'Osservatorio Nomisma-Assosalute' on generic drugs[2] investigated the main trends in procurement policies. Another paper analyses the effects of tenders for off-patent biological drugs, showing that the actual price depends on the number of competitors and the way medicines lots are defined[3] However, none of these documents has investigated the general performance of procurement policies.

Objective

Our aim is to cover the literature gap on procurement policies, analysing the impact of these policies on i) the level of competition among sellers (number of competitors per bid; unsuccessful bids) and ii) the discount over list prices.

Methods

We carried out both a descriptive analysis, to analyse the general trend in procurement policies, regression analyses.

Regression analyses used:

- as explanatory variables, the level of aggregation (hospital/agency, network of hospital/agencies, region), the ex-ante openness of the procedure (open procedures, invited negotiations, etc.), the presence of multiple formulations and dosages in the lot/sub-lot, the presence of generic/biosimilar products,
- as dependent variables, the number of offers received for every lot/sub-lot, the discount over list prices, the probability of successful bids. A linear regression analysis was used for the first two dependent variables; a probit regression was used for the probability of successful bids,
- as control variables, time, region, ATC-class and, where needed, active ingredient.

We could rely on a database from IHS (Information Hospital Service), that includes all data on public procurement procedures for drugs from 2005 to 2016. The unit of observation was the minimum competitive domain, i.e. the smallest part of a public tender for

[1] Osservatorio Farmaci Cergas, 2018.

[2] http://www.assogenerici.it/it/studi-e-analisi/rapporto-nomisma-assogenerici-2016.htm.

[3] Curto S, Ghislandi S, van de Vooren K, et al, Regional tenders on biosimilars in Italy: an empirical analysis of awarded prices. Health Policy. 2014; 116(2-3):182-7.

which sellers can present competitive bids (lot or sub-lot). 1,951 tenders were mapped with a total of 319,989 competitive lots/sub-lots.

Results

From 2005 to 2016 we observed (i) a decrease in the number of lots per bid and of offers per lot, (ii) an increase in the number of not successful tenders, (iii) a huge increase in the number of innovative tenders (e.g. Sistemi Dinamici di Acquisizione); (iv) an increase in the number of lots including drugs with the same molecule and the same formulation (lotto semplice). The number of offers received is positively correlated with the inclusion of generics and biosimilars and with the circumstance that the winner is a generic drug. Discounts are higher for generics than for their corresponding originators, whereas the difference between discounts for biosimilars and the originators are less important. If the tender is successful, the level of aggregation has no effects on the final discount. The likelihood that the lot/sub-lot is not assigned is lower for lots were different formulation are considered in the same lot

Discussion

Despite some limitations (e.g. lots where categorised in a way that makes impossible distinguishing between lots with the same molecule and different molecules – 'gare in equivalenza terapeutica'; the research has not investigated the impact after the bid of the actual drugs use in health care organisations), this research has highlighted the effects of procurement strategies. Some results were expected (e.g. higher discounts for generics than branded products), others less expected (centralisation of procurement seems not having an important effect on discounts) or straightforward to interpret (e.g. higher unsuccessful rate of tenders when drugs with the same molecule and formulation are included in the lot). In general, there is a notable variability on the used tenders, potentially generating sub-optimal contracting and inefficiencies in the process of public procurement.