APPLICATION OF PARETO'S ANALYSIS ON HOSPITAL'S DISCHARGE DRUGS DISTRIBUTION

CP-074

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Background:

Pareto's principle (PP) assumes that in any group of factors that contribute to create an effect, only a few of them (20%) are responsible for the majority (80%) of effect (key factors).

Purpose

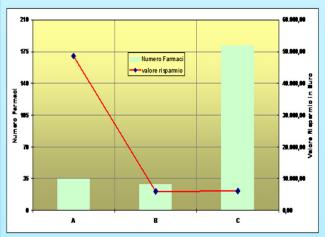
This work aims to identify the essential factors (drugs) for the effect: the National Health System (SSN) saves money when the hospital distributes drugs to the patient on hospital discharge (first cycle). We want to verify compliance with the PP.

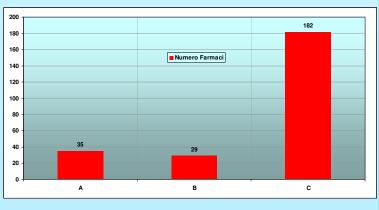
Materials and methods:

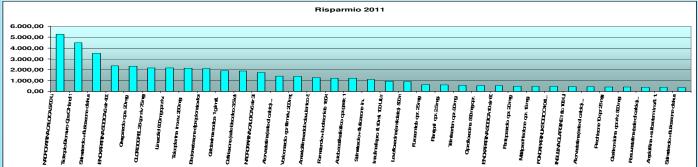
When patients are discharged, hospital specialists give a prescription to the patients. From January 2012 to December 2013, a retrospective analysis of dispensed drugs was performed. Data were processed evaluating the prescriptions. The difference in price between hospital and affiliated pharmacies was calculated. Pareto's analysis was carried out to identify essential drugs (factors). If the statistical distribution follows PP, some drugs have a higher impact on savings (group A) compared with the other two identified groups (B and C) which progressively have a lower impact.

Results:

From January 2012 to December 2013, 80% of total savings was generated by 20% of those drugs (group A) defined as "essential". In 2012, 14.22% of drugs (35/246) produced a savings of 79.93% (Euro 48 558 to 60 749 total). Groups B and C (80% of drugs) accounted for 20% of the total savings. In 2013, 16% of the drugs (31/192) produced 79.51% of the savings. The biggest savings observed were: LMWH (nadroparin calcic, euro 6651, enoxaparin sodium euro 3674), tiotropium bromide (euro 6300) and salmeterol+fluticasone 50/500 (euro 4550). The total amount saved in 2012–2013 was euro 85 927.







Conclusions:

PP was verified through the definition of one group of essential molecules and secondary groups. The application of PP proved an ideal method for the evaluation of the data, as it allowed presentation of them with great effectiveness by facilitating communication and decision making. First cycle drugs dispensation results in great economic advantages. Using PP, we identified essential drugs, focusing on where to intervene to optimise the SSN's economic savings. Using the first cycle of therapy together with PP, we can find new indicators for expenditure control, therapeutic appropriateness and consumption trends