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OBJECTIVES

Polypharmacy in many cases implies an appropriate and rational use of drugs; Its variation induces an increase in the volume of drug consumption and impacts the Prescribed Drug Expenditure (PDE). The aim of this study is to estimate the impact of the variation in the prevalence of polypharmacy rate in the PDE during 2018-2021.

METHODS

Cross sectional descriptive study of polymedicated patients was developed. Data was extracted from the individual outpatient dispense records from a health insurance company. Polypharmacy and hypermedication were defined when patients consumed ≥ 5 and ≥ 10 medications in at least a continuous period. A simulation of PDE of 2021 is developed in which the prevalence of polypharmacy is neutralized between 2018 and 2021.

RESULTS

	2018			2021			Simulation of 2021		
	PD ≥ 1	PD1-4	PD ≥ 5	PD ≥ 1	MP1-4	MP ≥ 5	PD ≥ 1	PD1-4	PD ≥ 5
Therapeutic Intensity(TI)	172	113	333	216	185	286	216	185	286
Cost per DDD	\$0.059	\$0.092	\$0.028	\$0.061	\$0.069	\$0.048	\$0.061	\$0.069	\$0.048
Patients Attended	264,737	193,720	71,016	376,732	259,269	117,463	374,372	273,946	100,426
Prescribed Drug Expenditure	\$2,675,232	\$2,021,993	\$653,240	\$4,928,750	\$3,323,223	\$1,605,527	\$4,897,875	\$3,511,344	\$1,372,664

Table 1. Estimation of the PDE for the population that consumes drugs (with polypharmacy and non-polypharmacy) in 2021 according to the prevalence of 2018.

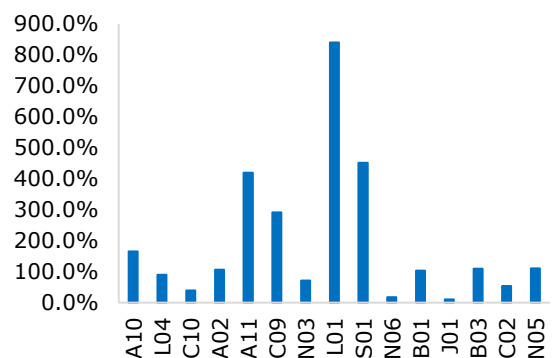


Figure 1. Percentage Variation (%) in the PDE for the 15 most expensive groups of drugs – ATC. 2018-2021

Polypharmacy rate was 26,82% in 2018 and 31,17% in 2021. The PDE in 2015 constant US\$ dollars for PP increased from \$653,240 to \$1,605,527. Neutralizing the prevalence of polypharmacy, the PDE of 2021 was \$1,372,664, 110% higher than the PDE of 2018 due to the cost per DDD increased from \$0.028 to \$0.048, despite TI decreased from 333 to 286 but, lower than 2021 PDE because 2018 polypharmacy is lower.

CONCLUSIONS

Polypharmacy has had a significant impact on the increase in PDE of the insurance company because in 2021 the cost per DDD increased as a consequence of the prescription of more expensive health technologies. The design of interventions and strict protocols need to be developed to mitigate the risk of non rational prescriptions in polymedicated patients and controlling the evolution of PDE.