COVERAGE EVOLUTION OF ANTI-HEMOPHILIC MEDICINES INTO THE PUBLIC HEALTH SYSTEM OF A MIDDLE-INCOME COUNTRY

HPR72

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INTRODUCTION

Although hemophilia is a Low Prevalent Disease (LPD) there are multiple medicines for the treatment and prevention of their associated hemorrhages. Mexico has the longest approval process to commercialize medicines of Latin America, in orphan drugs used for LPD this is not different (1). Therefore, it is expected that, at a national level, the number of medications available to patients with hemophilia will be high.

In Mexico nearly 80% of patients use the Mexican Public Health Services (MPHS) to gain access to their treatments (2). The published coverage drug analysis were done at national level and for the entire rare diseases category. Until now, there are no published studies about the coverage of medicines in the MPSH for hemophilia patients.

OBJECTIVE

Analyze the evolution of coverage of anti-hemophilic drug treatments in the Mexican Public Health System (MPHS) through the last 3 decades.

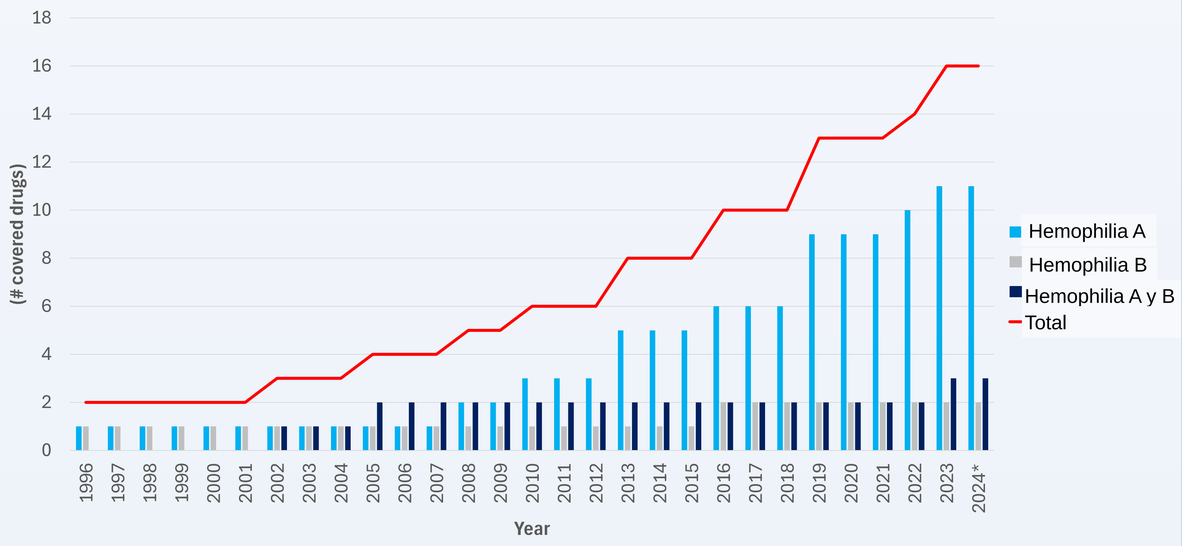
MATERIAL & METHODS

All new medicines approvals and their Indications of Use (IoU) included in the MPHS from 1996 to May 2024 were identified. Total number of anti-hemophilic medicines were followed retrospectively by 29 years to characterize the inclusion or exclusion process of medicines and their IoU. A sub-analysis for the type of hemophilia, A (HA) or B (HB), was performed. The IoU were catalogued and counted as “general indication” if the approved indication was just “hemorrhage” and as “specific indication” if the approval was for a particular medical condition such as “surgical procedures”, “use in patients with inhibitors” or “severe”.

RESULTS

Three decades ago, there were only 2 medicines to cover the health needs of hemophilic patients: one for HA and one for HB. For 6 years (one fifth of the period analyzed), there were no additional alternatives. Since then, the coverage of new medicines was accelerated to include up to 3 per year. In 29 years, the drug coverage has grown 7 times (n=14). Currently, 68.8% (n=11/16) of them attend HA, 18.7% HB (n=2/16) and 12.5% (n=3/16) for both types of hemophilia. **Figure 1.**

Fig 1. Coverage of anti-hemophilic medicines in the Mexican Public Health Services since 1996 to 2024*



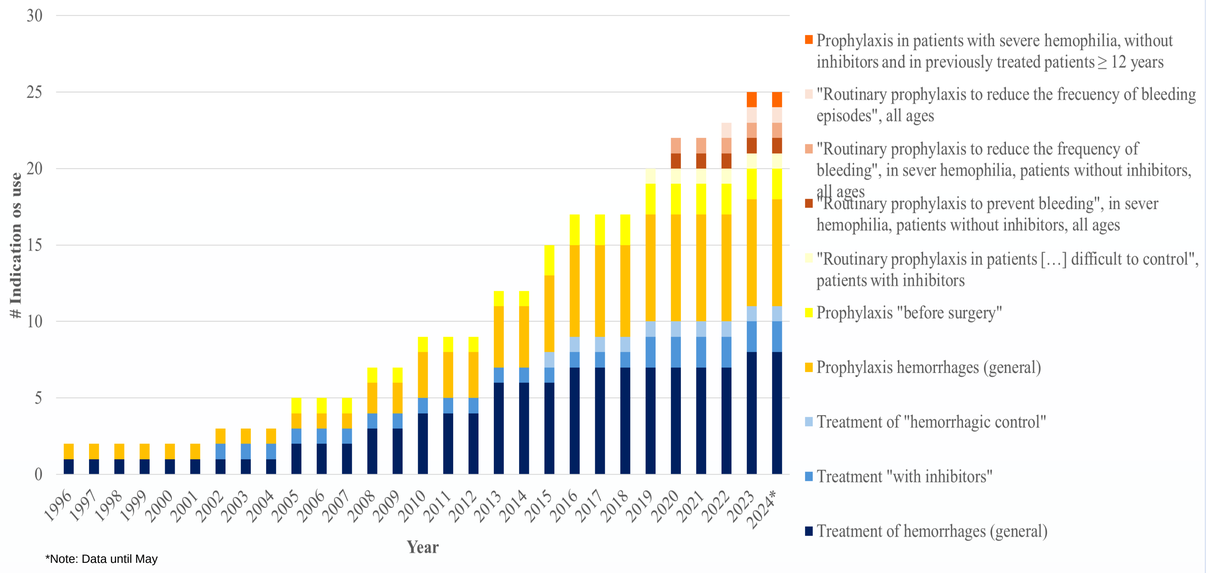
*Note: Data until May

Indications of Use (IoU).

In 1996, the MPHS covered 3 IoU for hemophilia patients; 2 in HA and 1 in HB. In 2024, there were 35 additional IoU, 76.3% of them to attend HA (n=27) and 23.7% in HB (n=9). That represents a growth of 13 and 8 times, respectively. As an illustrative example, **figure 2** shows the typical evolution of coverage of drugs for HA (acquired hemophilia is not shown).

Notably, in the period of study, although 73.6% of the approved new IoU were for “specific indications” (n=14/19), the approvals for “general indications” continued to grow. For example, in 2023 when 8 medicines already have the general IoU for “hemorrhage treatment”, one additional drug was approved. **Table 1** summarizes the incorporations of new IoU and drugs by category.

Fig 2. Coverage of anti-hemophilic medicines for hemophilia A in the Mexican Public Health Services since 1996 to 2024*



*Note: Data until May

Table 1. Qualitative analysis of the Indications of use by category

Hemophilia type	Indication	Indication of use	1996 (n=)	1996 (%)	2024/ Mayo (n=)	2024/ Mayo (%)	Approved medicines with the indication of use (Approved year)
Hemophilia A (Congen	Treatment	Hemorrhages (general)	1	50.0	9	31.0	Human antihemophilic factor (1996), Eptacog recombinant factor VIIa * (2005), Recombinant factor VIII (2008), Human coagulation factor VIII (2010), Octocog alpha recombinant (2013), Moroctocog (2013), Recombinant turoctocog alpha recombinant (2016), Simoctocog (2019), Frozen human plasma (2023)
		Hemorrhages **with inhibitors**	0	0.0	1	3.4	Antifactor VIII inhibitor coagulant complex (FEIBA) (2002)
		Hemorrhages **with inhibitors "inducction of immune tolerance"**	0	0.0	1	3.4	Human blood coagulation factor VIII + von Willebrand factor (2019)
		"Hemorrhagic **control**"	0	0.0	1	3.4	Moroctocog (2015)
	Prophylaxis	Hemorrhages (general)	1	50.0	7	24.1	Human antihemophilic factor (1996), Recombinant factor VIII (2008), Human coagulation factor VIII (2010), Octocog alpha recombinant (2013), Moroctocog (2015), Recombinat turoctocog alpha (2016), Simoctocog (2019)
		Before surgery	0	0.0	2	6.9	Eptacog recombinant factor VIIa *(2005), Moroctocog (2015)
		"**Routinary prophylaxis in patients […] difficult to control**", patients **with inhibitors**	0	0.0	1	3.4	Emicizumab (2019)
		"Routinary **prophylaxis to prevent bleeding**" in **severe hemophilia**, patients **without inhibitors, all ages**	0	0.0	1	3.4	Emicizumab (2020)
		"Routinary prophylaxis **to reduce the frequency of bleeding**", in **severe hemophilia**, patients **without inhibitors, all ages**	0	0.0	1	3.4	Emicizumab (2020)
		"Routinary prophylaxis **to reduce the frequency of bleeding episodes", all ages**	0	0.0	1	3.4	Rurioctocog alfa pegol (2022)
		Severe, without inhibitors in previously treated patients ≥ 12 years	0	0.0	1	3.4	Damoctocog alfa pegol (2023)
Hemophilia A (Acquired)		Acquired with inhibitors	0	0.0	1	3.4	Eptacog recombinant factor VIIa * (2005)
		Acquired	0	0.0	2	6.9	Human blood coagulation factor VIII + von Willebrand factor (2019), Forzen human plasma (2023)
Total Hemophilia type A			2	100.0	29	100.0	
Hemophilia type B	Treatment	Hemorrhages (general)	1	100.0	4	44.4	Factor IX or nonacog alpha (1996)*, Eptacog recombinant factor VIIa (2005), Frozen human plasma (2023)
		with inhibitors	0	0.0	1	11.1	Antifactor VIII inhibitor coagulant complex (FEIBA) (2002)
		in patients "congenital deficiencies of any of the vitamin K-dependent coagulation factors, when the specific concentrated factor is not available".	0	0.0	1	11.1	Human prothrombin complex (2016)
	Prophylaxis	Hemorrhages (general)	0	0.0	1	11.1	Factor IX or nonacog alpha (2003)
		Before surgery	0	0.0	1	11.1	Eptacog recombinant factor VIIa (2005)
		"perioperative […] of bleeding in congenital deficiencies of any of the vitamin K-dependent coagulation factors, when the specific concentrate is not available"	0	0.0	1	11.1	Human prothrombin complex (2006)
Total Hemophilia type B			1	100.0	9	100.0	

Finally, the study identified new and categorical different IoU to attend uncovered needs but, others with subtle to little rational differences.

No medicine or IoU was excluded in the timeframe analyzed.

DISCUSSION

The coverage of antihemophilic medicines has grown substantially in the last 30 years, especially for HA, with fewer options for HB. Interestingly, the IoU amplified the coverage of both general needs, and specific indications.

A decade ago, one previous study reported the steady growth of both IoU in diseases of high prevalence (3). Some of the reasons for a redundant offer were the need of specific patients’ solutions and commercial interests; as could be with hemophilic patients. However, in the low prevalent diseases, additional rationalizing criteria has driven approvals other than coverage needs. The drugs for hemophilia are expensive and used for long periods of time. In Mexico, the MPHS has established an explicit cutting-costs policy (4). For that reason, more than one provider of medicines could be accepted with the same IoU in order to create competition and bring down prices. These practices have some economic benefits for the buyers but, at the same time, adds complexity to the manage of their formulary lists. Unfortunately, one side effect is the coverage of IoU with little rationality, as some of the examples identified in this study.

REFERENCES

1) IQVA. FIFARMA Patient W.A.I.T Indicator 2024- Latin America. IQVA; 2024.

2) Bautista S, Vargas A, Colchero A. Búsqueda de atención y utilización de servicios en el primer nivel, 2006-2023. Salud Publica Mex 2024; 66: 589-598.

3) Rico-Alba I, Figueras A. The evolution of Reference Drug Lists and Clinical Practice Guidelines in the public health system of a middle-income country. Br J Clin Pharmacol 2014; 78(2): 410-21.

4) Reyes-Terán G. Optimización de tratamiento: el Proyecto de CCINSHAE. SSA. 12 Febrero 2020

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