

# ANALYSIS OF PUBLIC EXPENDITURE OF PHARMACEUTICAL UTILIZATION OF FEMALE INFERTILITY IN HUNGARY IN THE LAST DECADE

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## OBJECTIVES

In Hungary, the number of live births has been decreasing since multiple decades. The government has set a national strategic purpose to increase the accessibility to infertility treatments. The reform started in 2019, resulting in a significant increase in the state's involvement in providing and financing infertility treatments. This paper aims to evaluate the public expenditure related to infertility about pharmaceutical utilization in Hungary.

## METHODS

During the research turnover data of prescriptions for infertility diagnoses was analyzed. The following WHO ICD (revision Xth.) infertility diagnoses were included in the study: N97.0; N97.1; N97.2; N97.3; N97.4; N97.8; N97.9. The study analyzed annual public expenditures linked to different infertility. Moreover, the market share linked to pharmaceutical products was also evaluated. The study database was provided by the Health Data Warehouse of the National Hospital General Directorate. The examined period covered 2015-2023 years. The cost was set in USD (the mean value of 1 USD during the study period= 301.70 HUF).

## RESULTS

The total public expenditure for infertility-related pharmaceutical utilization was 104.52 million USD in Hungary. The highest level was identified in 2023 (93.17 million USD) while the lowest was in 2015 (4.47 million USD). A significant difference was captured in expenditure linked to diagnosis. The highest market share was represented by N97.9 ICD (female infertility, unspecified; 75.63 million USD). Expenditure by active substance represented a different outcome. The highest expenditure was related to follitropin alfa (42.29 million USD), progesteron (13.85 million USD) and alfa follitropin/ alfa lutropin (9.54million USD).

## CONCLUSIONS

The public expenditure has increasing remarkably during the study period. From the year of the reform, the government took on a greater role by increasing public subsidies for infertility-related pharmaceuticals. Based on the result, the financial burden of Hungarian patients related to infertility treatment has been relieved.

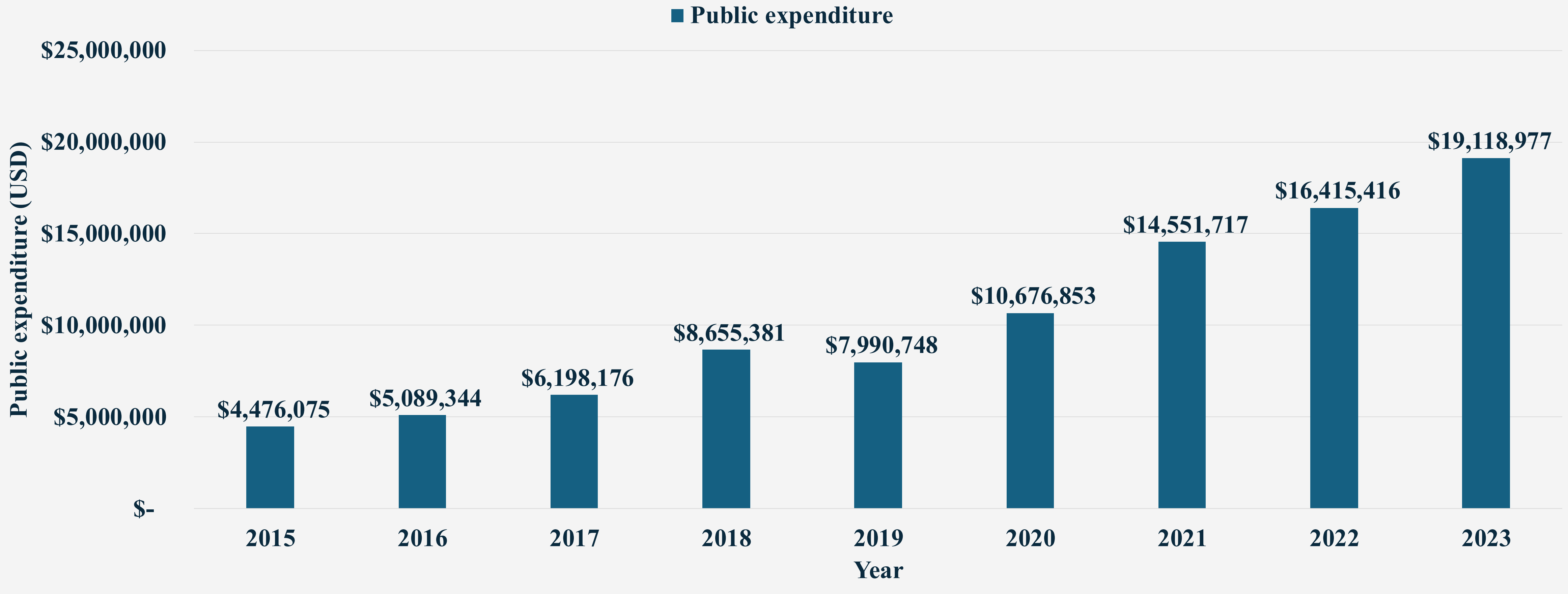


Figure 1. Annual public expenditure of infertility-related pharmaceutical utilization in Hungary (NHIFA, 2015-2023)

ICD code	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Distribution (%)
N9700	\$ 154.263	\$ 187.109	\$ 241.623	\$ 262.123	\$ 183.805	\$ 114.283	\$ 115.855	\$ 146.427	\$ 461.403	\$ 1.866.892	2,0%
N9710	\$ 109.044	\$ 85.337	\$ 111.626	\$ 202.048	\$ 180.705	\$ 238.736	\$ 205.833	\$ 278.416	\$ 315.710	\$ 1.727.454	1,9%
N9720	\$ 288	\$ 432	\$ 1.405	\$ 1.090	\$ 2.898	\$ 7.649	\$ 8.855	\$ 23.626	\$ 6.940	\$ 53.182	0,1%
N9730	\$ 273	\$ 124	\$ 135	\$ 1.535	\$ 1.451	\$ 1.666	\$ 1.696	\$ 206	\$ 2.038	\$ 9.123	0,0%
N9740	\$ 235.577	\$ 203.864	\$ 241.395	\$ 419.951	\$ 430.967	\$ 597.519	\$ 650.196	\$ 682.808	\$ 842.526	\$ 4.304.803	4,6%
N9780	\$ 306.518	\$ 461.051	\$ 516.816	\$ 920.296	\$ 842.235	\$ 965.184	\$ 1.501.674	\$ 1.818.579	\$ 2.246.187	\$ 9.578.540	10,3%
N9790	\$ 3.670.112	\$ 4.151.427	\$ 5.085.175	\$ 6.848.339	\$ 6.348.686	\$ 8.751.816	\$ 12.067.608	\$ 13.465.354	\$ 15.244.175	\$ 75.632.693	81,2%
Total	\$ 4.476.075	\$ 5.089.344	\$ 6.198.176	\$ 8.655.381	\$ 7.990.748	\$ 10.676.853	\$ 14.551.717	\$ 16.415.416	\$ 19.118.977	\$ 93.172.687	100%

Table 1. Public expenditure of ICD related to female infertility in Hungary (2015-2023.)

Denomination of the active substance	ATC code	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Distribution (%)
follitropin-alfa	G03GA05	\$ 2.628.634	\$ 2.813.250	\$ 3.014.668	\$ 3.782.658	\$ 4.578.695	\$ 5.463.434	\$ 6.574.560	\$ 6.950.774	\$ 6.484.880	\$ 42.291.554	44,6%
combinations,alfa follitropin/ alfa lutropin	G03GA30 (G03GA51)	\$ 1.009.955	\$ 1.206.781	\$ 1.423.410	\$ 2.687.855	\$ 612.221	\$ 913.800	\$ 1.561.592	\$ 1.887.460	\$ 2.547.274	\$ 13.850.349	14,6%
human menopausal gonadotropin	G03GA02	\$ 222.152	\$ 783.212	\$ 1.135.161	\$ 1.782.239	\$ 1.050.425	\$ 1.041.795	\$ 1.420.809	\$ 2.112.940	\$ 9.548.732	\$ 9.548.732	10,1%

Table 2. Public expenditure and denomination of the top 3 active substance (2015-2023)

Top3 pharmaceuticals			
	BEMFOLA	OVALEAP	PERGOVERIS
Public expenditure	\$ 15.543.966	\$ 15.019.851	\$ 13.876.819
Distribution of total public expenditure (%)	16,4%	15,8%	14,6%
Denomination of the active substance	follitropin-alfa	follitropin-alfa	combinations,alfa follitropin/ alfa lutropin

Table 3. Public expenditure of TOP 3 most expensive medicines to treatment female infertility (2015-2023)

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