

Budget Impact Analysis of Dimethyl Fumarate for the Treatment of Relapsing-Remitting Multiple Sclerosis in Iraq

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Introduction

Multiple sclerosis (MS) is an immune-mediated, inflammatory, demyelinating disease of the central nervous system that can lead to physical disability, cognitive impairment, and decreased quality of life. Relapsing-remitting MS (RRMS) is the most common type of MS at its onset.

Objective

This study assesses the financial impact of introducing Dimethyl Fumarate (DMF) into Iraqi public formulary for RRMS, using budget impact model.

Method

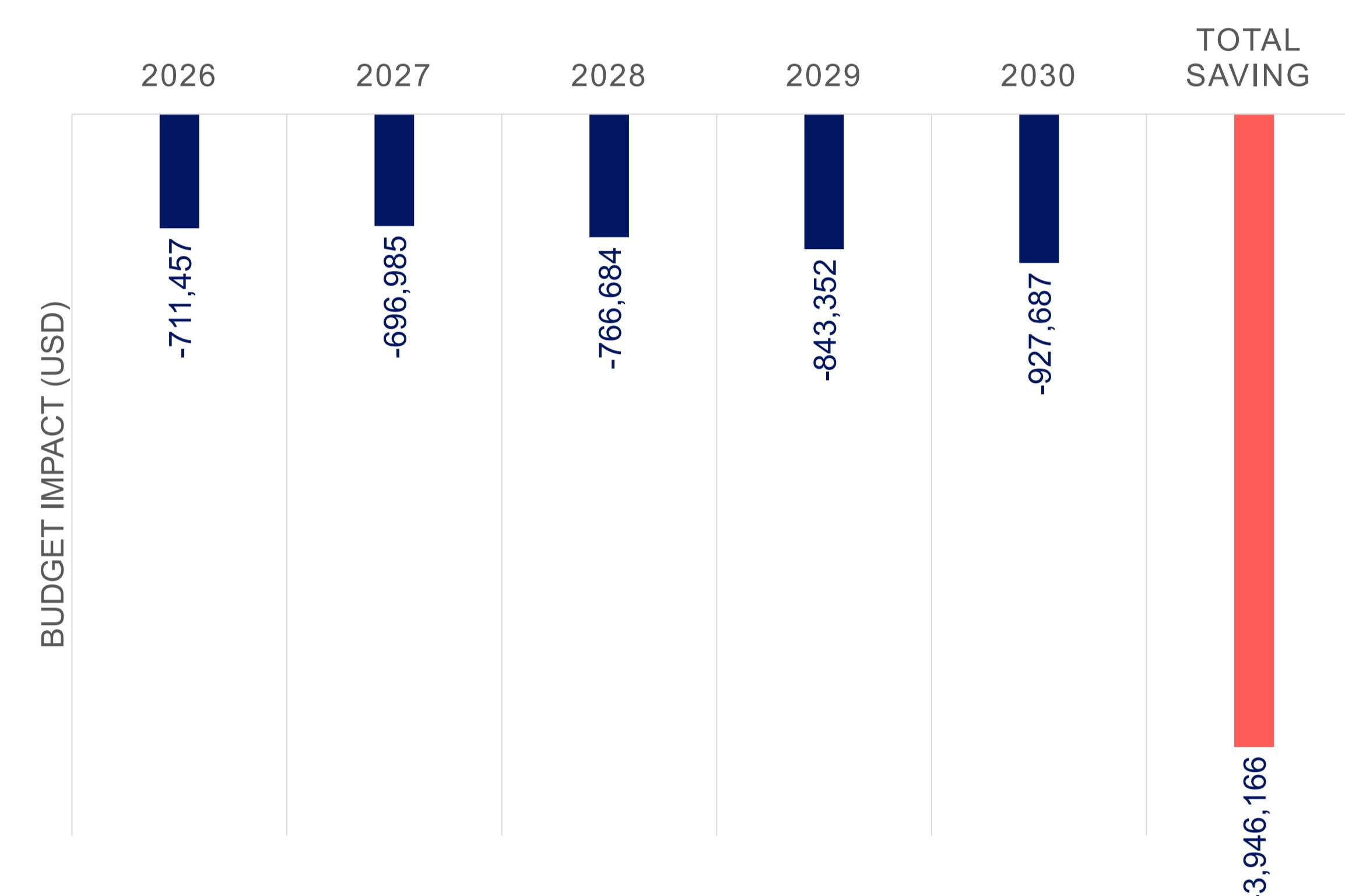
A 5-year budget impact analysis was conducted from Iraqi public payer perspective. We evaluated the annual financial consequences of adding DMF to the existing therapies in the public formulary which included: Interferon Beta 1B Injection, Interferon Beta 1A Injection, Teriflunomide tablets, Fingolimod capsules, Natalizumab injection and Ocrelizumab injection.

Current tender prices were estimated from the total number of units awarded and total value awarded in 2024, as reported in AMS Analytics Q1 FY25 report for KIMADIA.

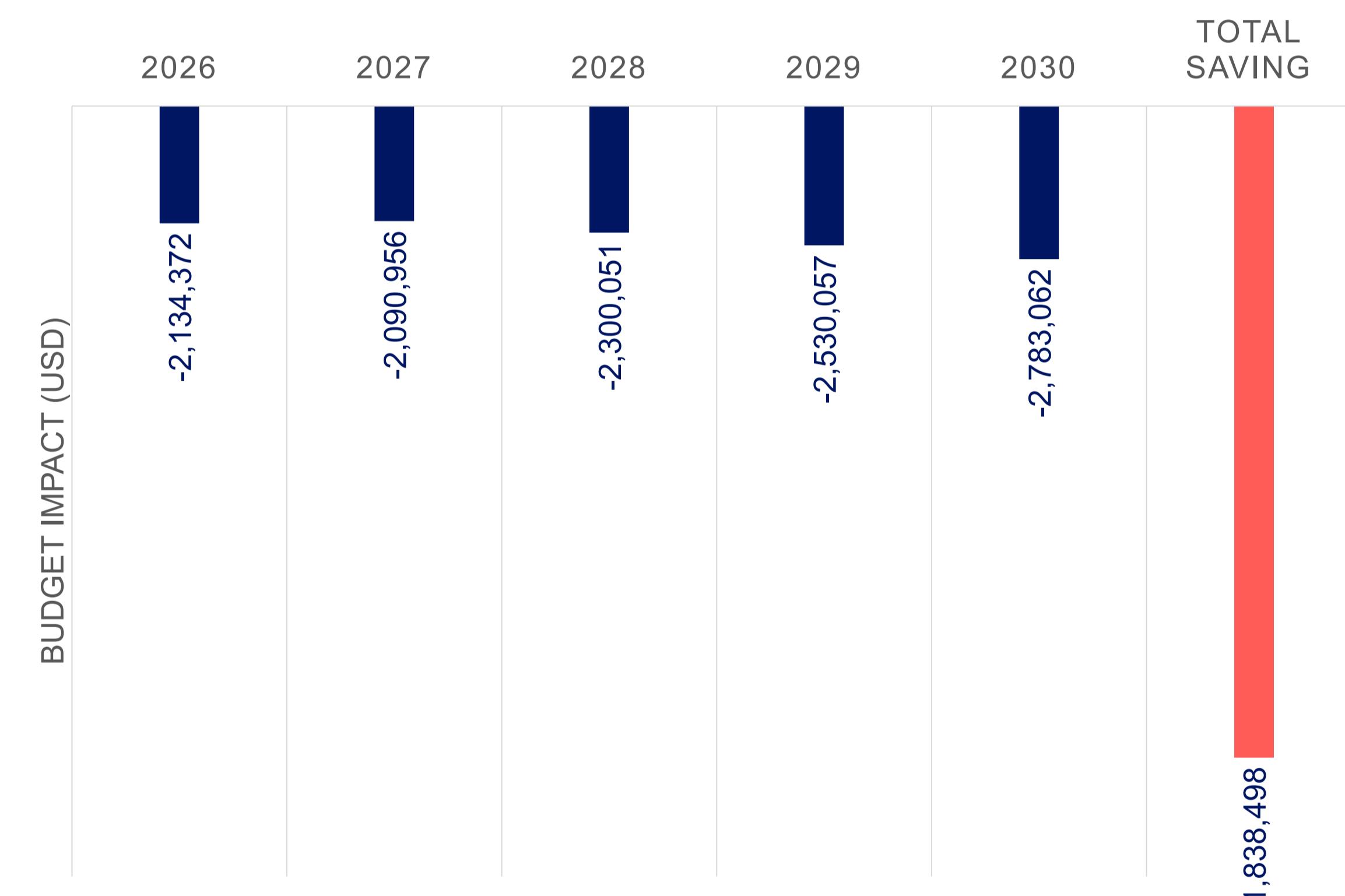
Results

Introducing DMF resulted in cumulative 5-year savings of USD3.95 million at 10% market share and USD 11.84 million at 30% share, with annual budget impact of -4% in the first year and -3% in subsequent years (10% share), and -11% in the first year and -10% thereafter (30% share).

• Annual Budget Impact at 10% capture rate



• Annual Budget Impact at 30% capture rate



Active Ingredient	Strength per unit	Pack size	Pack Price (USD)	Monthly Cost (USD)
Dimethyl Fumarate	120mg	14 tablets	\$ 73.00	
Dimethyl Fumarate	240mg	56 tablets	\$ 292.50	
Interferon Beta-1a	44mcg/0.5ml	12 Syringe for SC injection	\$ 235.07	
Interferon Beta-1a	30mcg/0.5ml	4 Syringe for IM injection	\$ 195.89	
Interferon Beta-1b	250mcg/ml	15 Syringe for SC injection	\$ 600.00	
Fingolimod	0.5 mg hard capsules	28 capsules	\$ 244.86	
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TERIFLUNOMIDE	14 mg	30 tablets	\$ 190.00	

Existing therapies and their current market shares were sourced from AMS Analytics Q1 FY25 report for KIMADIA.

Two uptake scenarios were considered: DMF capturing 10% or 30% of total patients using interferons and oral therapies annually, with no uptake from patients using Natalizumab or Ocrelizumab for both scenarios.

Conclusion

Adding DMF to Iraqi public formulary for treating RRMS is associated with substantial cost-savings to the healthcare budget. These findings may support more efficient allocation of healthcare resources in Iraq.

	Year 1	Year 2	Year 3	Year 4	Year 5
Fingolimod	6.18%	6.18%	6.18%	6.18%	6.18%
Fingolimod	6.18%	6.18%	6.18%	6.18%	6.18%
Interferon Beta-1a	12.60%	12.60%	12.60%	12.60%	12.60%
Interferon Beta-1a	8.80%	8.80%	8.80%	8.80%	8.80%
Interferon Beta-1b	44.28%	44.28%	44.28%	44.28%	44.28%
TERIFLUNOMIDE	11.96%	11.96%	11.96%	11.96%	11.96%
Dimethyl Fumarate	10.00%	10.00%	10.00%	10.00%	10.00%

References:

1. AMS Analytics Q1 FY25 report for KIMADIA, the Iraqi governmental agency that regulates the import and distribution of pharmaceuticals and medical equipment.