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Budget and Service Impact of Introducing Faricimab for Diabetic Macular Edema in Algerian Hospitals

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PRINCIPAL RESULT

−165 M DZD

Estimated three-year reduction in drug acquisition costs with a full switch to faricimab (−31.3%)

−40%
intravitreal injections over three years (−4,042)

26 weeks
of injection sessions freed in year 2 (19 in year 1)

135→99%
injection capacity used in year 1, back within capacity

01 BACKGROUND

Diabetic macular edema (DME) is a leading cause of vision loss in diabetes; its prevalence reaches 8.7% (type 1) and 8% (type 2) in Algerian cohorts [1,2].

Anti-VEGF therapy requires frequent intravitreal injections (IVT) and monitoring visits, which increase pressure on hospital ophthalmology capacity [3,4].

Faricimab, a bispecific antibody targeting VEGF-A and angiopoietin-2, was non-inferior to aflibercept with dosing up to every 16 weeks [5].

Algerian public hospitals are supplied with anti-VEGF agents by the Central Hospital Pharmacy (PCH); the effect of new agents on service capacity has not been quantified locally.

02 OBJECTIVE

To estimate the budget and service impact of a full switch from aflibercept and ranibizumab to faricimab for DME in an Algerian university hospital over three years.

03 METHODS

INPUTS
Activity data, Jan to Jun 2025
84 visits and 60 IVT per week
PCH prices

MODEL
Service Impact Model
Adapted to Algeria
Reference vs full switch

OUTPUTS
Consultations
IVT demand vs capacity
Drug costs

MODEL OVERVIEW

SETTING	Ophthalmology, CHU Nedir Mohamed, Tizi Ouzou
POPULATION	Naïve and pretreated DME patients eligible for faricimab
COMPARATORS	Aflibercept + ranibizumab vs full switch to faricimab
INTERVAL	Up to 12 weeks (comparators); 16 weeks (faricimab)
PERSPECTIVE	Public hospital payer; drug acquisition costs
HORIZON	3 years; no discounting; Algerian dinars (DZD)
DATA	Double entry; cross-validation with ophthalmologists
REPORTING	ISPOR BIA Good Practice II [6]; STROBE [7]

04 RESULTS: OBSERVED ACTIVITY

5 January to 25 June 2025

475 DME patients followed

79 new patients per month

1,195 IVT administered

IVT by agent and unit acquisition cost

421 (35%) | 774 (65%)

Drug acquisition over the period: **61.8 M DZD**

SERVICE CAPACITY (MODEL INPUTS)

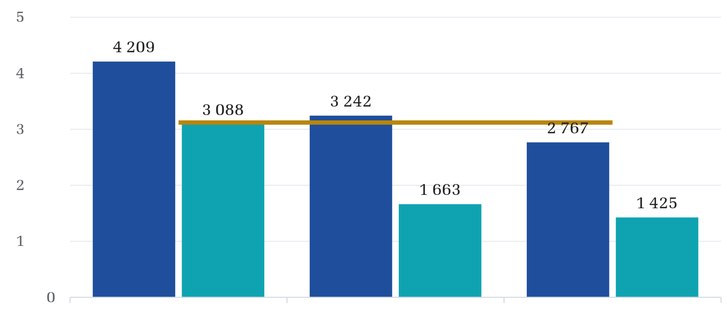
- **84 consultations / week** — 4,368 per year, 5 clinic days
- **60 IVT / week** — 3,120 per year, 4 injection days
- **18 injecting ophthalmologists** — 4 operating-room teams
- **20 min per consultation** — 8 min per injection

05 RESULTS: DEMAND VERSUS CAPACITY

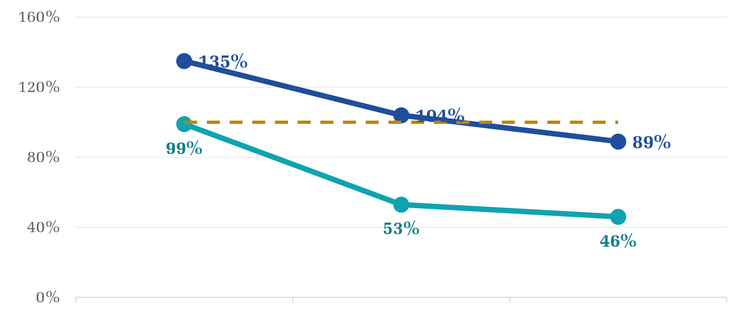
Reference vs full switch to faricimab

Reference (aflibercept + ranibizumab) · Faricimab (full switch) · Available capacity (100%)

Intravitreal injections per year



Injection capacity utilisation (%)



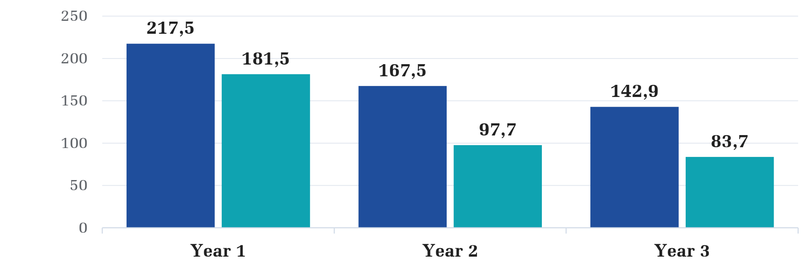
Clinic consultations and sessions freed	Year 1	Year 2	Year 3
Consultations, reference	4,345	3,035	1,629
Consultations, faricimab	4,000	2,247	903
Change in consultations (%)	−8	−26	−45
Weeks of clinic sessions freed	4	9	9
Weeks of injection sessions freed	**19**	**26**	**22**

Weeks freed = reduction in demand divided by weekly capacity (84 consultations; 60 IVT). Percentages recomputed from model outputs.

06 RESULTS: BUDGET IMPACT

Public hospital payer perspective, million DZD

Drug acquisition costs per year



NET BUDGET IMPACT (FARICIMAB – REFERENCE)

Year 1 **−36.1 M** −16.6%
Year 2 **−69.8 M** −41.7%
Year 3 **−59.2 M** −41.4%

−165.1 M
DZD over 3 years (528.0 to 362.9 M)

−41.7%
peak annual saving, year 2

Savings arise from fewer injections despite a higher acquisition cost per injection (derived). Consultation and session costs excluded.

07 DISCUSSION

Consistency with international evidence and limitations

INJECTION REDUCTION WITH FARICIMAB

This study, 3 years, full switch **−40%**

UK hospital, per patient-year [8] **−35%**

UK NHS simulation vs aflibercept, 5 years [4] **−21%**

In the UK simulation, faricimab was also cost-saving versus aflibercept [4].

LIMITATIONS

- ❑ Single-centre simulation based on paper records.
- ❑ Full switch only; partial uptake not modelled.
- ❑ Drug acquisition costs only, at PCH prices.
- ❑ No deterministic or probabilistic sensitivity analysis.

CONCLUSIONS

In this simulated full switch, faricimab would bring injection demand within capacity from year 1, free up to 26 weeks of injection sessions per year and reduce drug acquisition costs by about 165 M DZD over three years.

IMPLICATIONS

- Include service capacity in HTA and procurement
- Plan anti-VEGF needs with service impact models
- Confirm with partial uptake and real-world data

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