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3-Year Budget Impact of Switching Patients with Schizophrenia to Long-Acting Paliperidone (PPLAT) in the UAE

Nahida Nayaz Ahmed[1], Waiel Al Naeem[2], Nicole Gebran[3], Mehnaz Zafar[4], Amr Nasrallah[5], Abdel Rahman Elrashedy[5], Mohamed Hossameldin[5], **Lorenzo Pradelli[6]**

[1]CMO-SAKINA, Abu Dhabi, United Arab Emirates; [2]Pharmacy Department, Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates; [3]Pharmacy Department, Dubai Health, Mohammed Bin Rashid University of Medicine and Health Sciences, Dubai, United Arab Emirates; [4]Consultant Psychiatrist and Head of Community Psychiatry Services Amal Psychiatric Hospital, Emirates health services, AL Amal Psychiatric Hospital Al Aweer, Dubai, United Arab Emirates; [5]Johnson and Johnson Middle East FZ-LLC, Dubai Healthcare City, Dubai, United Arab Emirates; [6]AdRes HE&OR, Turin, Italy.

OBJECTIVE

- Schizophrenia is a chronic mental health condition characterized by psychosis and substantial disability, with a significant impact on personal, social, and economic outcomes[1,2]
- Poor adherence to oral antipsychotics (OAPs) is a major driver of relapse, with only ~50% of patients adherent during the first year[3,4]
- Long-acting injectable (LAI) antipsychotics enhance treatment continuity and sustained drug exposure, and real-world data show improved effectiveness as dosing intervals lengthen[5]
- In the UAE, suboptimal adherence and limited persistence with OAPs remain common, leading to higher relapse rates and increased healthcare resource use[6,7]
- This analysis was conducted to investigate the economic sustainability of a 30-40% switch from oral antipsychotics (OAPs) to long-acting injectable antipsychotics (LAIs) in the UAE, considering the availability of paliperidone formulations with increasingly extended dosing intervals, including the 6-month formulation (PP6M), and assessing the resulting impact on healthcare costs over a 3-year time horizon

METHODS

MODEL DESIGN

- A dynamic budget impact (BI) model with an underlying Markov structure was developed to estimate the 3-year financial impact of switching patients from OAPs to long-acting paliperidone in the UAE
- Transitions between treatments were modelled assuming a progressive switch from OAPs to PP1M, PP3M and, in the alternative scenario, to PP6M
- Efficacy inputs (relapse risk) were derived from an updated systematic review and analyzed using a Bayesian hierarchical model[8-11]
- Only direct medical costs (drug acquisition, administration, AEs management, hospitalization) were included. Hospitalization was used as a proxy for relapse

MODEL STRUCTURE AND TREATMENT SEQUENCES

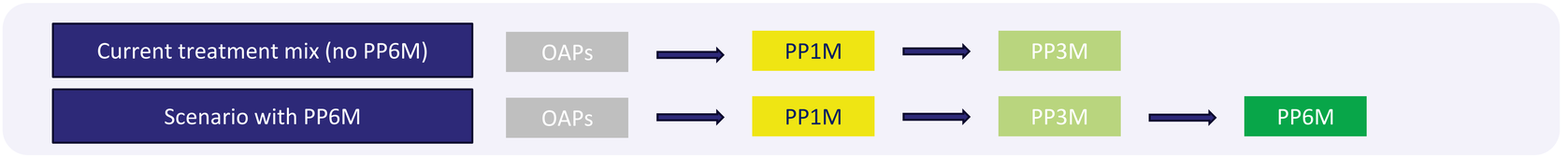


Table 1 – Key model assumption

Key model assumption	
Population	Patients with schizophrenia (UAE public sector)
Perspective	Public sector
Time horizon	3 years
Comparators	Current mix vs. scenario with PP6M
Costs included	Direct medical costs (drug acquisition, administration, AEs management, hospitalization)
Data sources	Published literature, UAE sources, expert opinion

Table 2 – Efficacy and adherence inputs

Efficacy and adherence inputs	
Hazard ratio vs. OAPs (relapse risk)	
Parameter	Value
PP1M	0.62
PP3M	0.41
PP6M	0.24
Adherence rate	
OAPs	50%
Paliperidone LAIs	82%

Table 3 – Costs input

Unit costs (AED)	
Cost component	**Annual cost**
OAP (weighted avg.)	5,120
PP1M (weighted avg.)	16,058
PP3M (weighted avg.)	16,130
PP6M (weighted avg.)	11,979
Cost per relapse	32,000
LAI administration	70/dose
OAP AE management	2,400

MARKET SHARE ASSUMPTION

Table 4 – Market share assumption

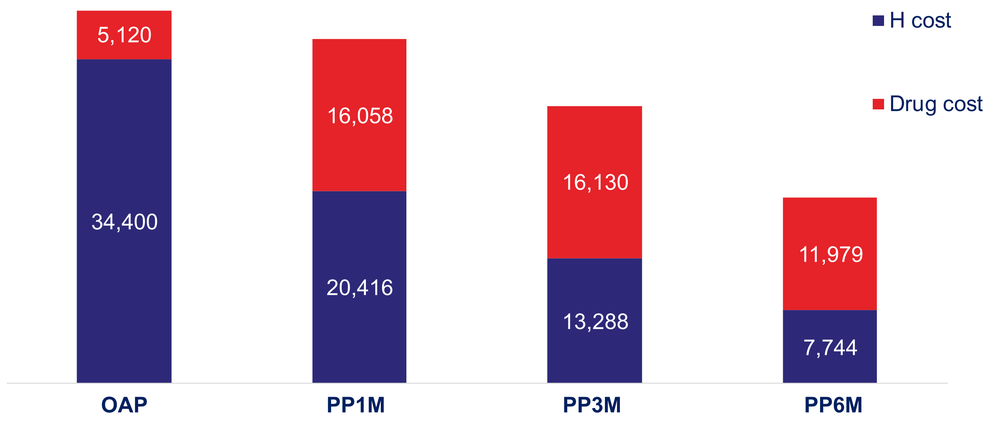
Treatment	Without PP6M 2026	2027	2028	With PP6M 2026	2027	2028
OAPs	86%	84%	81%	76%	61%	46%
Other LAI	5%	5%	5%	5%	5%	5%
Paliperidone LAIs	10%	12%	15%	20%	35%	50%
↳ *PP1M/ PP3M/PP6M*	*90%/10%/0%*	*85%/15%/0%*	*80%/20%/0%*	*75%/10%/15%*	*60%/10%/30%*	*40%/10%/50%*

RESULTS

1. ANNUAL COST PER PATIENT (1-YEAR MODEL RESULTS)

Total annual cost per patient was lower for all paliperidone LAI formulations compared with OAPs, with greater reductions for longer dosing intervals

Figure 1 – Annual cost per patient



2. COST DIFFERENCE VS. OAP

Switching to paliperidone LAIs was associated with lower total costs per patient compared with OAPs, with a 50% reduction for PP6M

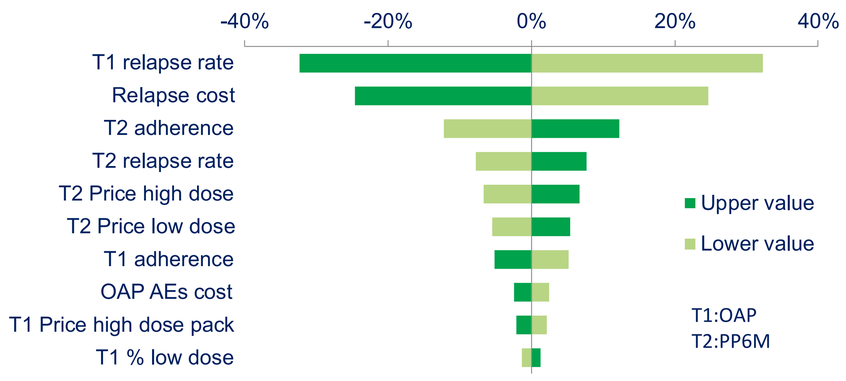
Table 5 – Cost difference

	PP1M	PP3M	PP6M
Drug cost difference (AED)	10,938	11,010	6,859
Other costs difference (AED)	-13,984	-21,112	-26,656
Total cost difference (AED)	**-3,046**	**-10,102**	**-19,797**
Relative total cost difference	**-8%**	**-26%**	**-50%**

3. ONE-WAY SENSITIVITY ANALYSIS

Parameters were varied individually by ±20%, with all others fixed at base case. Bars show the resulting range of total cost savings; the vertical line indicates the base case. OAP relapse rate and relapse cost were the main drivers.

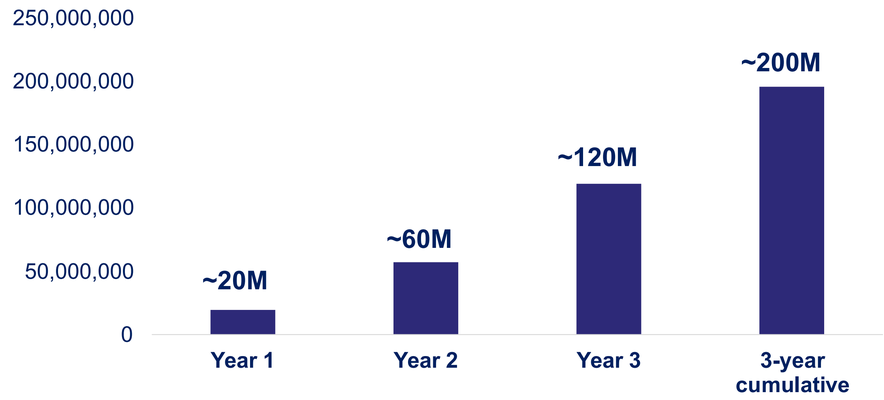
Figure 2 – One-way sensitivity analysis



4. 3-YEAR CUMULATIVE BUDGET IMPACT

The introduction of PP6M is estimated to generate cumulative savings of ~200 million AED over 3 years

Figure 3 – 3-year cumulative budget impact



KEY TAKEAWAYS

~200 million AED
Total budget savings over 3 years

~7,700
Additional patients switched to LAIs

~5,500
PP6M initiations over 3 years

-50%
Lower annual cost per patient vs. OAPs with PP6M

CONCLUSIONS

- Switching patients with schizophrenia from OAPs to long-acting paliperidone formulations, including PP6M, is associated with substantial budget savings (~200 million AED over 3 years) for the UAE public sector
- Savings are driven by reduced hospitalization costs due to lower relapse rates, which offset higher pharmaceutical expenditure
- These findings support broader adoption of long-acting paliperidone as a sustainable treatment strategy to improve clinical outcomes and optimize resource use in the UAE

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ISPOR Vienna 2026

Acknowledgements This analysis was funded by Johnson & Johnson Middle East.