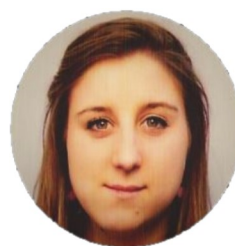


Cost Effectiveness of Emollients in the Prevention of Relapses in Atopic Dermatitis in the French Setting



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PRESENTED AT:



BACKGROUND

Atopic dermatitis (AD) is an inflammatory, relapsing skin disorder defined by inflammatory flares followed by periods of remission. The management of atopic dermatitis requires visits to the doctor, specific clothing, but also the need to apply local treatments to calm periods of crises. All this care has a strong impact on the health and the quality of life and social patients. The prevalence rate is estimated at 15%. The follow-up of AD and the prevention of relapses have a great impact on health care, society costs but also on patient's expenditures.

The **aim** of the study is to demonstrate the medical value of emollient prescribing and explore the cost-effectiveness of different emollients prescribed in AD patients in the French setting.

DATA AND ANALYSES

It's an evidence-based model constructed from the literature:

- Randomized clinical trials and literature review for the efficacy of treatments;
- Resource utilisation from real-world data.

French data for resource utilisation and official prices were used.

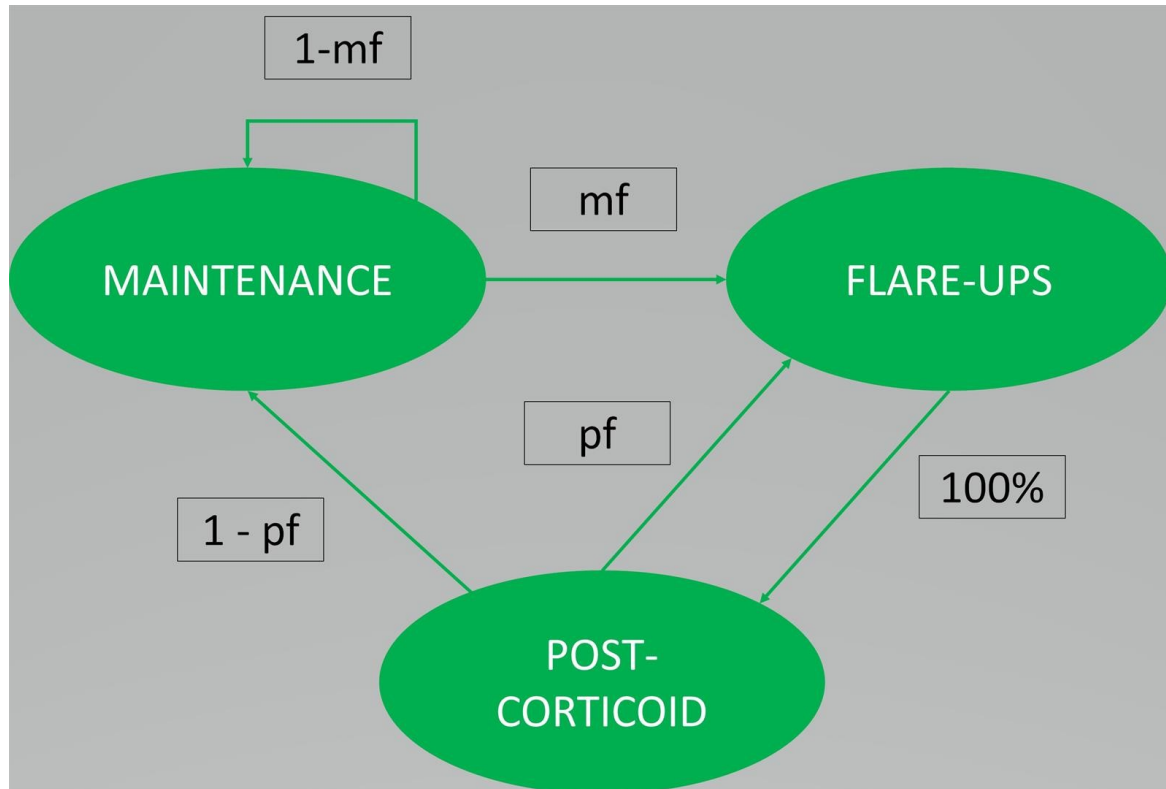
Deterministic and probabilistic sensitivity analyses were performed.

MODELLING

A Markov model with 3 health states : "Flare-up", "Post-corticoid", "Maintenance".

Patients were treated with topical corticosteroid during flare-ups periods. Patients used emollients in all health-states.

The post-corticoid state represents the phase following the one where patients were treated with corticosteroid and lasts 28 days, i.e. 1 cycle. Therefore, patients can't stay in this state after a cycle, the either undergo new flare-ups or enter the maintenance state.



- **Periode:** 5-year period with a cycle of 28 days
- **Perspective:** French health system using reimbursement from statutory health insurance, voluntary health insurance and out-of-pocket payments
- **Target population:** Patients with AD who have just been treated with corticoid the remove flare-ups
- **Comparators** : two dermocostics (A, D), one mass-market emollient (B), one medical device (C), one generic of the mass-market emollient (E) and no emollient users
- **Outcome:** Time without flare-ups (TWFU)
- **Costs:** Consultations, hospitalisations, prescriptions, out-of-pocket and lost productivity

EFFICACY AND COSTS

In the French health system perspective, emollient A is the most effective strategy and emollient E is the cheapest strategy.

	A	B	C	D	E	No Emollient
Effectiveness						
Time without relapse (years)	3.89	3.80	3.57	3.48	3.80	3.38
Costs						
Glucocosticosteroids	115.67€	129.42€	167.99€	184.37€	129.42€	200.37€
Hospitalisation	312.93€	328.75€	373.14€	391.99€	328.75€	410.39€
Consultations	208.35€	233.11€	302.59€	332.10€	233.11€	360.91€
Medical expenses total	636.96€	691.28€	843.72	908.46€	691.28€	971.66€
Emollients (Drugs)	0.00 €	0.00 €	0.00 €	0.00 €	27.45€	0.00 €
Emollient (Medical device)	0.00 €	0.00 €	566.20€	0.00 €	0.00€	0.00 €
Emollient (Patients/VHI)	726.87€	766.87€	2699.66€	788.01€	155.57€	0.00€
Total Emollients	726.87€	766.87€	3265.86€	788.01€	183.02€	0.00€
OOP (excluding emollients)	211.82€	219.49€	241.04€	250.19€	219.49€	259.13€
Total	1575.64€	1677.65€	4350.62€	1946.67€	1093.80€	1230.79€

No-emollient is a dominated strategy, the strategy is more expensive and less effective than treating AD with emollient E.

Emollient A, the most effective strategy is more expensive than emollient E (+481.84€) but also more effective by 0.082 years without flare-ups corresponding to 30 days difference without flare-ups. The computed ICER is 5877.48€/YWFU.

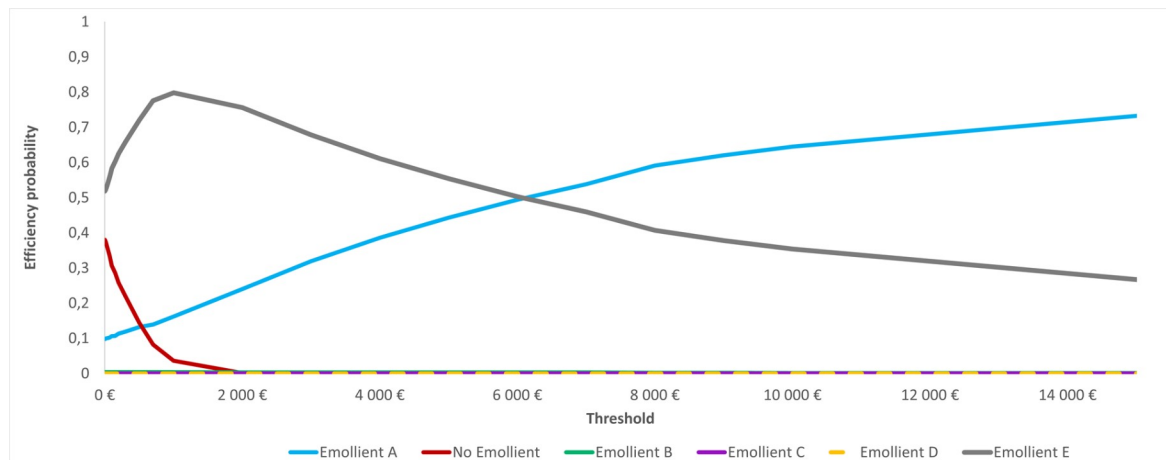
Strategy B, C, D are dominated strategy compared by strategy A.

	Costs	ΔC	Benefit	ΔB	ICER
Emollient E	1093.80€		3.803		
No Emollient	1230.79€	136.99€	3.380	-0,423	Dominated
Emollient A	1575.64€	481.84€	3.885	0.082	5877.48€
Emollient B	1677.65	102.01€	3.803	-0.082	Dominated
Emollient D	1946.67€	371.03€	3.475	-0.410	Dominated
Emollient C	4350.62€	2774.98€	3.573	-0.312	Dominated

Strategy A and E are on the efficiency frontier which is composed of all the efficient treatments.

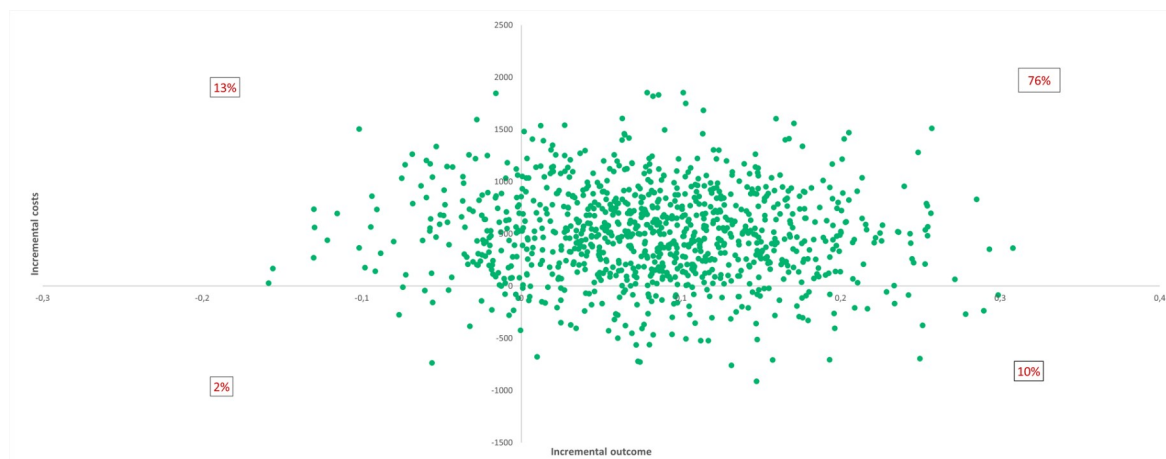
SENSITIVITY ANALYSES

From a Willingness-to-pay (WTP) below 6000€, strategy with emollient E maximises the net monetary benefits. Fromm 6100€ and upwards, using emollient A maximises the net monetary benefit.



In 89% of simulations in the cost-effectiveness plan, emollient A is more effective than emollient E and in 14% of simulations, emollient A is cheaper than emollient E.

In 13%, emollient A is both cheaper and more effective than emollient E: it is the dominant strategy. However, in 11% of simulations, emollient E is more effective and cheaper than emollient A; emollient A is dominated.



DISCUSSION

- Emollients are treatments with preventive effects on effective relapses compared to no emollient.
- Emollient A makes it possible to improve as much as possible this period of remission of 0.6 years is about 183 days without flare-ups compared to no emollient.
- Taking into account the all payers perspective, emollient A is on the efficiency frontier with the generic of the mass-market emollient which is reimbursed by the French statutory health insurance.

ABSTRACT

Background: Atopic dermatitis (AD) is an inflammatory, chronic, remitting-relapsing skin disease. This condition affects up to 10% of children and persists in adults. This disease is a burden to their health and quality of life. The follow up of AD and prevention of relapse have a great impact on health care spending, society costs and patient's out-of-pocket expenditure.

The aim of the study is to assess the cost-effectiveness of different emollients prescribed in a French setting for AD patients.

Methods: A three health-state Markov model was developed over a 5-year period. Randomized controlled trials were used for transition probabilities assessment. French data for resource utilisation were used as well as French official prices. An all payers perspective – with costs of treatment acquisition, administration, follow-up costs, out-of-pocket expenditure linked to DA – was used. MD and drugs' reimbursement rates are accounted for.

5 different emollients (A, B, C, D, E) and no emollient use were compared. Emollient E is the generic medication of B, warranting the same efficacy at a lower cost.

Health states were flare-ups during which patient is relapsing and is treated by topical corticosteroids, post-corticoid, and maintenance. We assumed patients used emollients in all health-states. The selected outcome was a time without flare-up (YWFU). Sensitivity analyses were performed.

Results: For emollient A, the 5-year cost amounts to 1 575.64 € and generates 3.89 YWFU. Treatment E is the cheapest strategy: 1 093.80€. Compared to treatment E, A is more expensive (+ 481.84€), and more effective (+ 0.084 YWFU, ie 30 days). ICER is 5737.04€/YWFU. No treatment is the least effective strategy (3.462 YWFU), costs 1230.78€, being dominated by strategy E. Strategies B, C, D are dominated.

Conclusion: Treating AD with emollient is a cost-effective strategy. From a willingness to pay of 6000€/YWFU and upwards strategy A is the most efficient.

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