

# Cost-savings Assessment of Fitusiran Prophylaxis in Minimizing Breakthrough Bleeding Treatment Expenses in the United Arab Emirates

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## OBJECTIVE

To evaluate cost-savings resulting from the reduction in clotting factor concentrates (CFC)/bypassing agents (BPAs) usage for managing breakthrough bleeds with fitusiran prophylaxis in the United Arab Emirates (UAE).

## BACKGROUND

- Fitusiran is a subcutaneous anti-thrombin (AT)-lowering therapeutic, that increases thrombin generation to restore haemostasis in people with haemophilia (PwH).<sup>1</sup>
- In March 2025, the United States Food and Drug Administration (FDA) approved fitusiran for preventing and reducing bleeds in people with haemophilia A or B (PwHA or PwHB) aged  $\geq 12$  years, with or without inhibitors.<sup>1</sup> Subsequently, it was approved in UAE in April 2025.<sup>2</sup>
- In the ATLAS-OLE (NCT03754790) trial, antithrombin-based dosing regimen (AT-DR; targeting AT levels of 15%–35%) of fitusiran was associated with a meaningful reduction in CFCs/BPAs utilisation for managing breakthrough bleeding episodes versus CFC/BPA prophylaxis.<sup>3</sup>

## METHODS

A cost analysis model was developed in Microsoft Excel.

### CFC/BPA episodic treatments used during breakthrough bleeds considered

- For PwHA without inhibitors: octocog alfa, efmorococog alfa, and ruriococog alfa pegol
- For PwHB without inhibitors: nonacog alfa, albutrepenonacog alfa, and eftrenonacog alfa
- For PwH with inhibitors: factor VIII inhibitor bypassing activity (FEIBA) and eptacog alfa

### Model inputs and assumptions

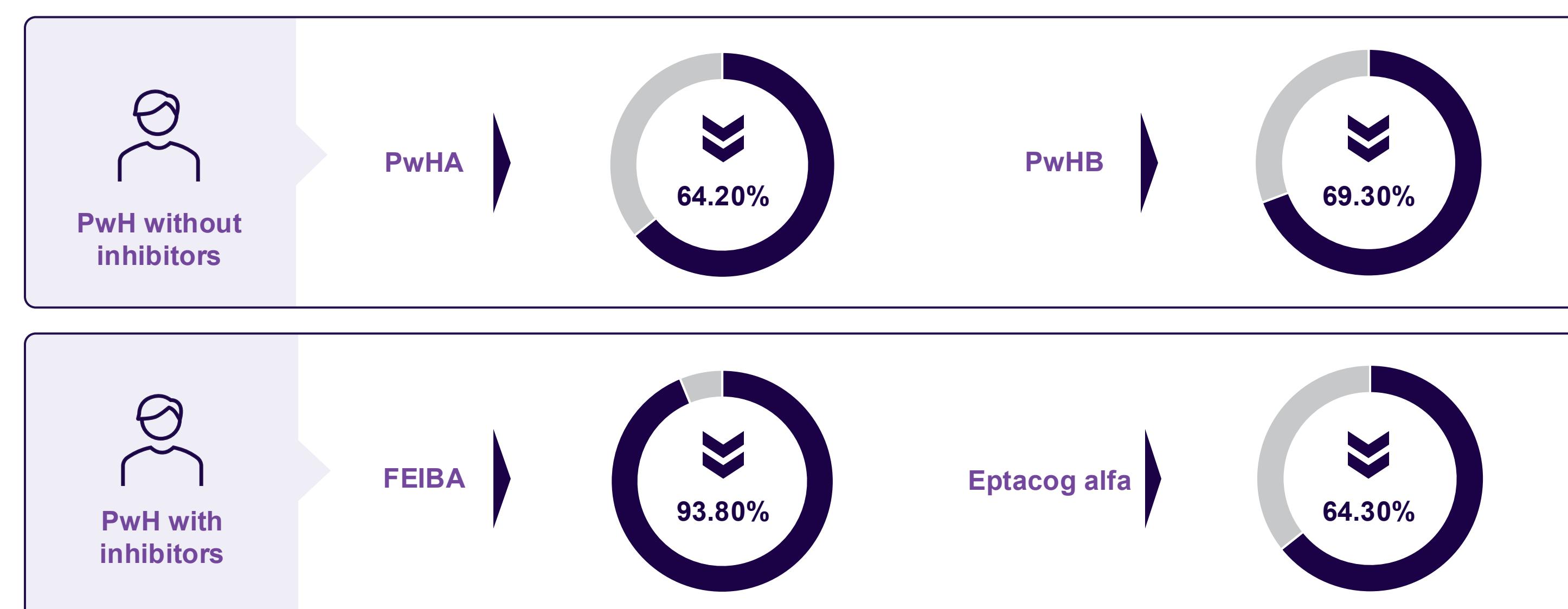
- Table 1 presents key inputs used for the calculation.
- Average patient weight of 70.00 kg was used.<sup>4</sup>
- Administration cost of 490 AED per infusion was used.<sup>5</sup>
- The published drug prices in UAE were used as the drug costs in the analysis.<sup>6</sup>
- The base-case assumed no vial sharing.
- Percentage reduction in mean annualised weight-adjusted factor consumption with fitusiran AT-DR prophylaxis was based on the ATLAS-OLE data (Figure 1).<sup>3</sup>

Table 1. Cost-calculation model inputs.

On-demand treatment	Cost per pack (AED)	CFC/BPA dose per kg	CFC/BPA doses to resolve one bleed	Total CFC/BPA dose per bleed with CFC/BPA prophylaxis	Total CFC/BPA dose per bleed with fitusiran AT-DR prophylaxis
<b>PwHA without inhibitors</b>					
Octocog alfa	950.00	30	1.5	3,150.00	1,127.70
Efmorococog alfa	876.00	20	1.5	2,100.00	751.80
Ruriococog alfa pegol	1,409.50	30	1.5	3,150.00	1,127.70
<b>PwHB without inhibitors</b>					
Nonacog alfa	1,718.50	30	1.7	3,570.00	1,095.99
Albutrepenonacog alfa	2,971.00	30	1.7	3,570.00	1,095.99
Eftrenonacog alfa	1,391.50	30	1.7	3,570.00	1,095.99
<b>PwH with inhibitors</b>					
FEIBA	1,958.00	75	3.7	19,425.00	1,204.35
Eptacog alfa	3,703.00	90	6.0	37,800.00	13,494.60

AED, UAE Dirham; AT-DR, antithrombin-based dosing regimen; BPA, bypassing agent; CFC, clotting factor concentrate; IU, International Unit; PwH, people with haemophilia; PwHA, people with haemophilia A; PwHB, people with haemophilia B; UAE United Arab Emirates; USPI: United States prescribing information. Dose per kg for PwH on CFC/BPA prophylaxis were sourced from USPI<sup>7–14</sup>; Percentage reduction considered in factor consumption for PwH on fitusiran AT-DR prophylaxis are based on ATLAS-OLE data.<sup>3</sup>

Figure 1. Estimated reduction in the mean annualized weight-adjusted consumption of on-demand CFC/BPA for breakthrough bleeds management with fitusiran AT-DR prophylaxis compared with that with CFC/BPA prophylaxis.



■ Reduction in CFC/BPA consumption for breakthrough bleeds management with fitusiran AT-DR compared with CFC/BPA prophylaxis. AT-DR, antithrombin-based dosing regimen; BPA, bypassing agent; CFC, clotting factor concentrate; FEIBA, factor VIII inhibitor bypassing activity; PwH, people with haemophilia; PwHA, people with haemophilia A; PwHB, people with haemophilia B.

### Analysis

- The analysis calculated drug cost per bleed, administration cost per bleed, and combined total cost for each episodic treatment among PwH receiving CFC/BPA prophylaxis and among those on fitusiran AT-DR prophylaxis.
- The difference between the costs of CFC/BPA prophylaxis and fitusiran AT-DR prophylaxis was presented as potential cost-savings with fitusiran AT-DR prophylaxis.
- A scenario analysis was conducted to evaluate the impact of vial sharing.

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## CONCLUSIONS

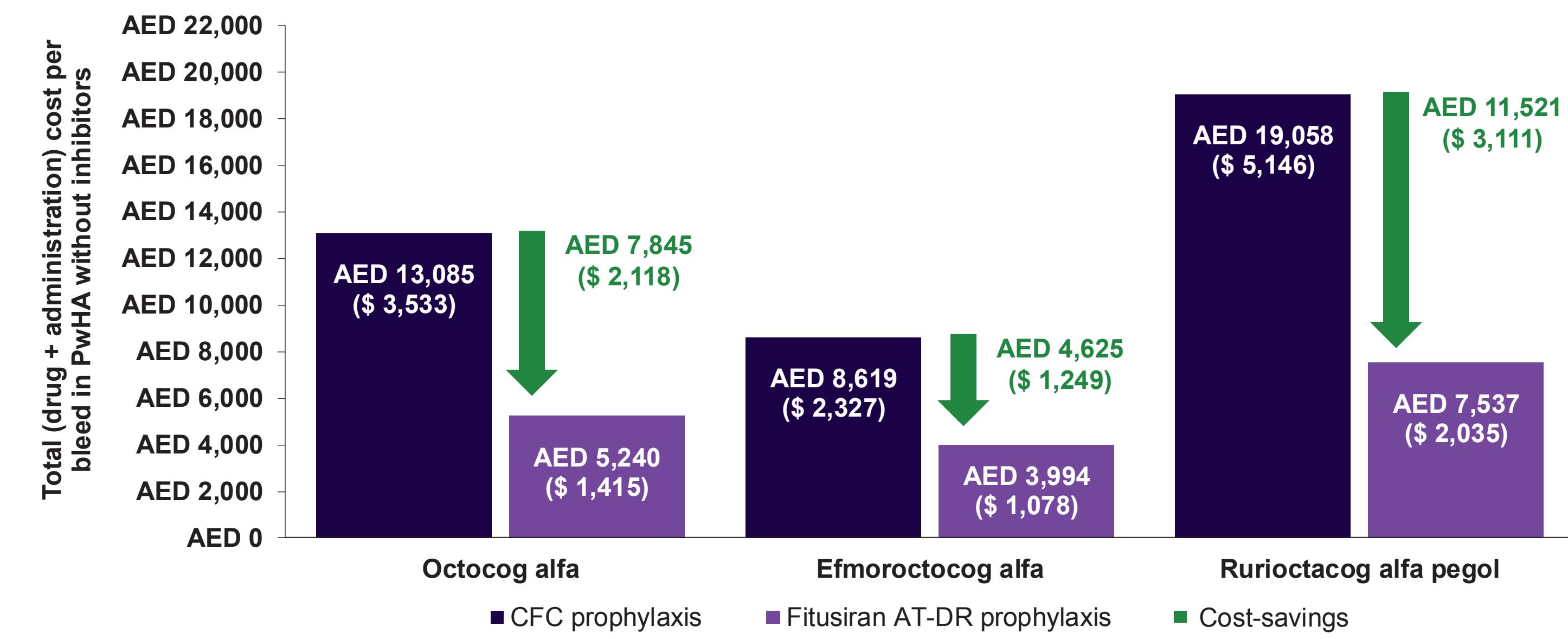
- In the UAE, fitusiran AT-DR prophylaxis may considerably reduce the costs associated with episodic treatments for breakthrough bleeds among PwH compared with that by CFC/BPA prophylaxis.
- PwH with inhibitors may experience larger cost-savings (AED 71,846 [\$ 19,398] to AED 90,761 [\$ 24,505]) than those without inhibitors.
- For payers and healthcare systems, these savings may substantially reduce annual budgets for haemophilia bleed management.

## RESULTS

### PwH without inhibitors

- Fitusiran AT-DR prophylaxis resulted in cost-saving per bleed ranging from AED 4,625 (\$ 1,249) to AED 11,521 (\$ 3,111) among PwHA without inhibitors (Figure 2).

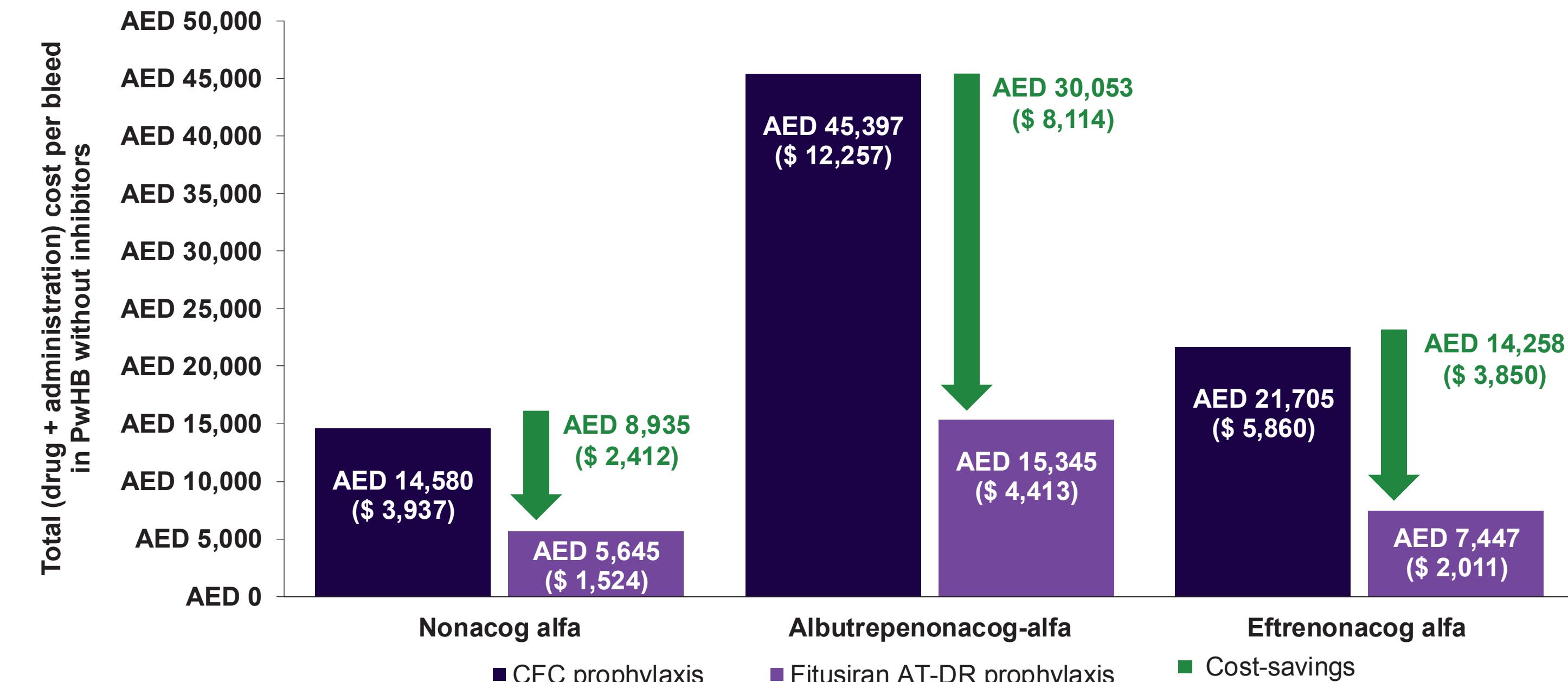
Figure 2. Treatment cost of managing breakthrough bleeds with CFC prophylaxis and fitusiran AT-DR prophylaxis among PwHA without inhibitors.



AED, UAE Dirham; AT-DR, antithrombin-based dosing regimen; CFC, clotting factor concentrate; PwHA, people with haemophilia A.

- Fitusiran AT-DR prophylaxis led to cost-saving per bleed between AED 8,935 (\$ 2,412) and AED 30,053 (\$ 8,114) among PwHB without inhibitors (Figure 3).

Figure 3. Treatment cost of breakthrough bleeds management with CFC prophylaxis and fitusiran AT-DR prophylaxis among PwHB without inhibitors.

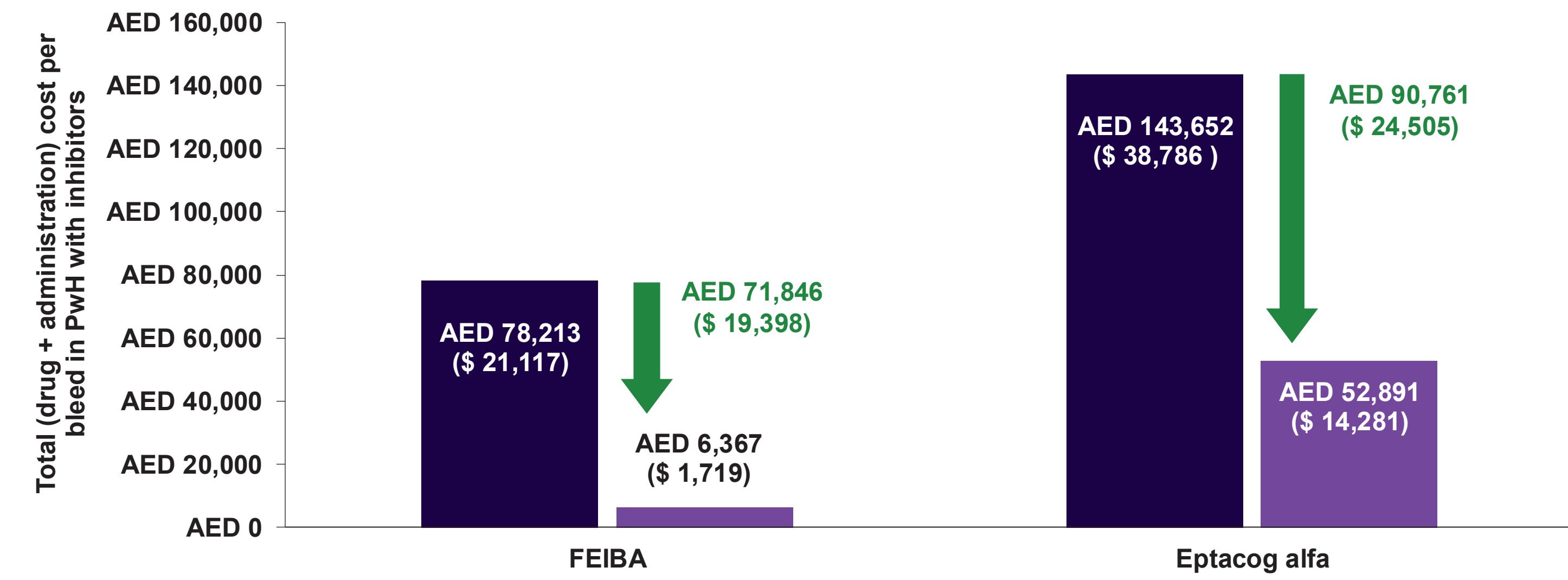


AED, UAE Dirham; AT-DR, antithrombin-based dosing regimen; CFC, clotting factor concentrate; PwHB, people with haemophilia B.

### PwH with inhibitors

- Fitusiran AT-DR prophylaxis demonstrated savings per bleed ranging from AED 71,846 (\$ 19,398) to AED 90,761 (\$ 24,505) in PwH with inhibitors (Figure 4).

Figure 4. Treatment cost of managing breakthrough bleeds with BPA prophylaxis and fitusiran AT-DR prophylaxis among PwH with inhibitors.



AED, UAE Dirham; AT-DR, antithrombin-based dosing regimen; BPA, bypassing agent; FEIBA, factor VIII inhibitor bypassing activity; PwH, people with haemophilia.

### Scenario analysis considering vial sharing

- The cost-saving associated with fitusiran AT-DR prophylaxis remained substantial across all haemophilia types and treatments.
  - Among PwH without inhibitors, cost-saving per bleed ranged from AED 4,969 (\$ 1,342) to AED 11,647 (\$ 3,145) in PwHA, and from AED 8,846 (\$ 2,388) to AED 29,744 (\$ 8,031) in PwHB.
  - In PwH with inhibitors, cost-saving per bleed ranged from AED 72,711 (\$ 19,632) to 91,892 (\$ 24,811).

## FUNDING

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## CONFlict of interests

Marion Afonso, Daisy Ng-Mak, Yuqian Shen, Shariq Ali, Amy Chen, Ahmed Mekky, Wedad Alnemari and Ion Agirrezzabal are employees of Sanofi and may hold stock and/or stock options in Sanofi.

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