# Healthcare Utilization and Persistence in Patients With Dravet Syndrome: A Retrospective Analysis Using US Claims Data

**Derek Ems, MPH[1], Srihari Jaganathan[1], Rob Sederman[2], Chen Chen[2], Amélie Lothe[3]; Shuang Wu[2]**

[1]UCB, Inc., Smyrna, GA, USA.
[2]Ambit Inc., Boston, MA, USA.
[3]UCB Pharma, S.A., Colombes, France.

## Question

What is the medication persistence associated with the use of fenfluramine (FFA) and the relationship between FFA use and healthcare events in patients with Dravet syndrome (DS)?

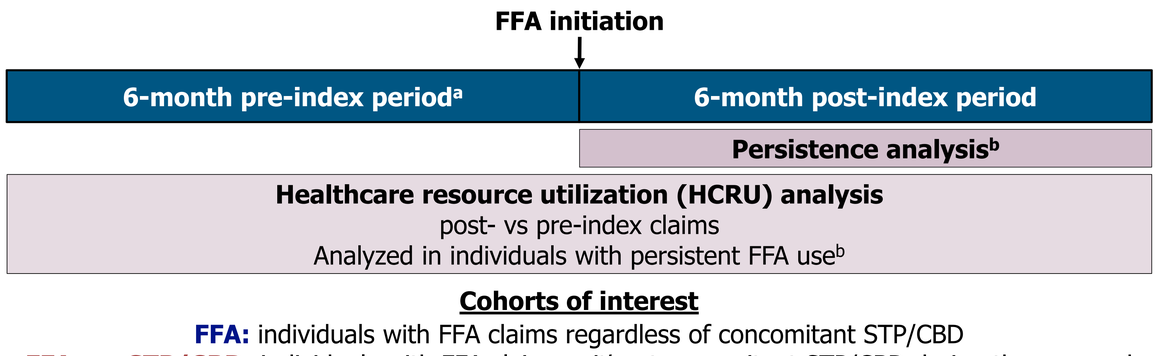
## Investigation

- We analyzed the Komodo Healthcare claims database for individuals with DS who received FFA from Oct 1, 2020, to June 30, 2023

## Methods

- Continuous claims data were required for 6 months before (pre-index period) and after (post-index period) FFA initiation
- Individuals were permitted to use other ASMs concomitantly (except where indicated)
- Persistence was assessed in individuals with continuous FFA claims data (no gap in claims >90 days) during the combined 6-month pre-index and 6-month post-index periods: A) regardless of stiripentol (STP) or cannabidiol (CBD) claims; and B) without STP/CBD claims
  - A Kaplan-Meier survival analysis was used to assess persistence from FFA initiation (Day 0) to 6 months (Day 180)
- In those individuals with persistent FFA use at Day 180, post- vs pre-index healthcare resource utilization (HCRU) claims data were analyzed
  - Measured by mean difference in number of events between post- and pre-index periods using a 2-tailed paired t-test

**Figure 1.** Study Design

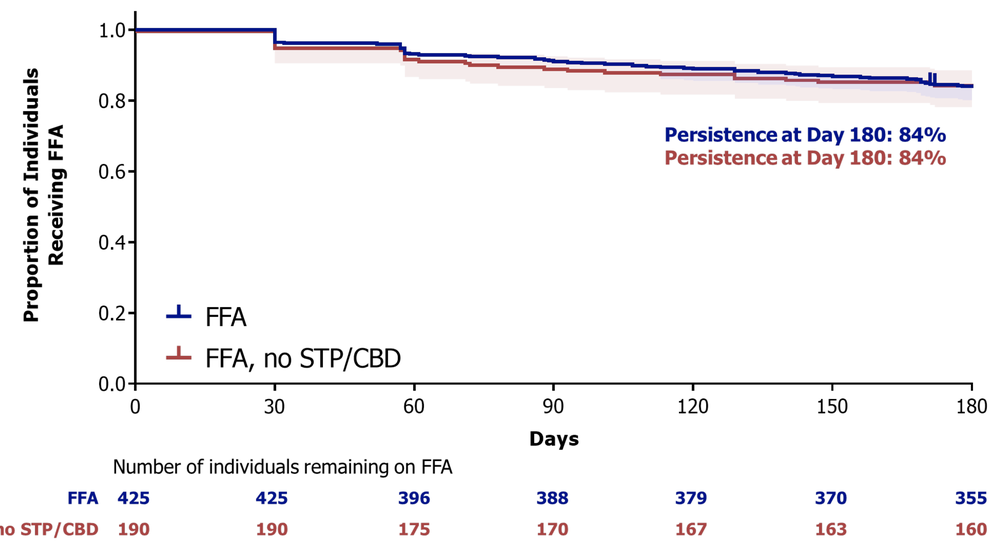



[a]No prescription claims for FFA during the 6 months prior to FFA initiation (index).
[b]Persistent FFA use defined as continuous FFA claims with no gap >90 days over 6 months following FFA initiation.
CBD, cannabidiol; DS, Dravet syndrome; FFA, fenfluramine; STP, stiripentol.

## Results

- We identified 425 individuals with DS who received FFA; 190 individuals without concomitant STP/CBD
- The 6-month persistence for both the STP/CBD inclusive and exclusive groups was 84%

**Figure 2.** 6-Month FFA Persistence Data in Individuals With DS




Discontinuation is defined as not having a treatment claim within 90 days following the last day of supply of a previous treatment claim.
Shaded areas indicate 95% confidence interval.
Individuals are censored if their last day of FFA claim is ≤90 days prior to the end of the study period.
Note: FFA, no STP/CBD data has been adjusted downward by 0.01 units for visibility.
CBD, cannabidiol; DS, Dravet syndrome; FFA, fenfluramine; STP, stiripentol.

- Individuals with persistent FFA use at Day 180 in the STP/CBD inclusive cohort (N=355) and exclusive cohort (N=160) were included in the HCRU analysis

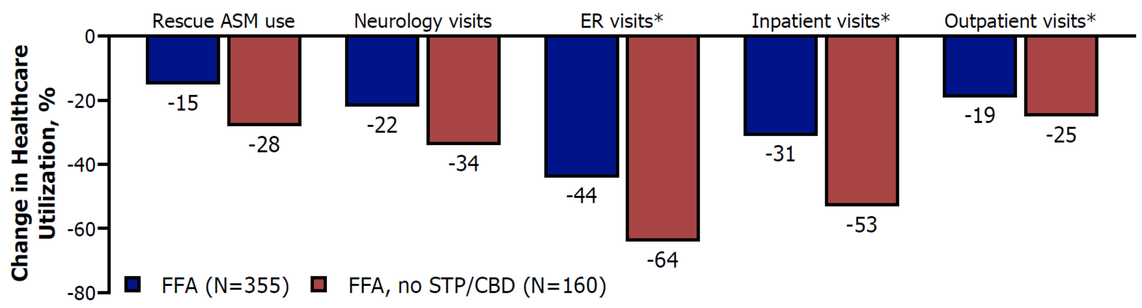
**Table 1.** Baseline Characteristics of Individuals With Persistent FFA Use at Day 180

| | FFA N=355 | FFA, no STP/CBD N=160 |
|---|---|---|
| Age at FFA initiation, median (range), years | 10 (1-42) | 9 (1-42) |
| Gender, male, % | 48 | 47 |
| Treatment history[a], % | | |
| Any ASM | 94 | 91 |
| Valproate[b] | 49 | 54 |
| Levetiracetam | 31 | 34 |
| CBD | 39 | 0 |
| STP | 19 | 0 |

Persistent FFA use defined as continuous FFA claims with no gap >90 days over 6 months following FFA initiation.
[a]Treatment history here is defined as any prescription claim made during the 6-month pre-index period.
[b]Including divalproex and valproic acid.
ASM, antiseizure medication; CBD, cannabidiol; FFA, fenfluramine; STP, stiripentol.

- Reductions were observed in all healthcare claims between the pre- and post-index period in individuals using FFA in both STP/CBD inclusive and exclusive regimens

**Figure 3.** Percentage Change in HCRU Claims During the First 6 Months of FFA Use in FFA-Persistent Individuals




*Seizure-related visits.
FFA-persistent individuals are defined as individuals with continuous FFA claims with no gap >90 days over 6 months following FFA initiation.
ASM, antiseizure medication; CBD, cannabidiol; ER, emergency room; FFA, fenfluramine; HCRU, healthcare resource utilization; STP, stiripentol.

**Table 2.** Post- vs Pre-Index HCRU Claims in Individuals With Persistent FFA Use at Day 180

| | FFA N=355 | | | FFA, no STP/CBD N=160 | | |
|---|---|---|---|---|---|---|
| | Mean Change | *P*-value | % Change | Mean Change | *P*-value | % Change |
| **Rescue ASM use** *(Unique days)* | -0.3 | 0.010 | -15 | -0.6 | 0.001 | -28 |
| **Neurology visits** *(Unique days)* | -0.4 | <0.001 | -22 | -0.6 | 0.001 | -34 |
| **Seizure-related ER visits** *(Unique visits)* | -1.0 | <0.001 | -44 | -1.7 | <0.001 | -64 |
| **Seizure-related inpatient visits** *(Unique visits)* | -1.3 | 0.111 | -31 | -3.1 | 0.018 | -53 |
| **Seizure-related outpatient visits** *(Unique visits)* | -2.8 | 0.003 | -19 | -3.8 | 0.007 | -25 |

*P*-values were calculated using 2-tailed paired t-tests: mean difference in number of days/visits with claims post- vs pre-index.
Persistent FFA use defined as continuous FFA claims with no gap >90 days over 6 months following FFA initiation.
ASM, antiseizure medication; CBD, cannabidiol; ER, emergency room; FFA, fenfluramine; HCRU, healthcare resource utilization; STP, stiripentol.

**Data caveats**

- Prescription claims do not necessarily indicate treatment use
- FFA initiation as determined here may not be the first use for a given individual; FFA use prior to the 6-month pre-index period is possible
- Safety data are not available in the claims database and have not been reported
- Selection bias may be introduced when patients without 6 months of continuous post-index claims are excluded

## Conclusions

- Individuals with DS receiving FFA that had 6 months of pre- and post-index claims data demonstrated a strong persistence over a 6-month period, regardless of concomitant STP/CBD use
- Strong persistence is typically associated with improved effectiveness and tolerability for chronic medications,[7] suggesting real-world benefits of FFA use in this population
- Reductions in HCRU claims observed over 6 months, regardless of concomitant STP/CBD use, suggests improved outcomes in this population
- Differences in HCRU between the STP/CBD inclusive and exclusive groups may be due to clinical differences between the groups
- Selection bias may be introduced due to exclusion of individuals without 6 months of post-index data, thus overestimating persistence and HCRU and limiting generalizability
- Future analyses may include individuals without 6 months of post-index claims data

## References

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## DISCLOSURES

**SJ, DE:** Employee of UCB Pharma. **RS, CC, SW:** Employee of Ambit, Inc., which has a contractual relationship with UCB Pharma. **AL:** Employment/Stock Ownership: UCB Pharma.

**This is a summary of the main findings. Please use the QR code to download the full poster.**

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Phone: +32 2 559 92 00
Email: UCBCares@ucb.com

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