

Accutane: Twitter versus FAERS Data

Reilly Dillon, Hailee Elderkin, Sally Everett, Christian Guzman, Erin Ryan, Tiffany Springmeyer

Introduction

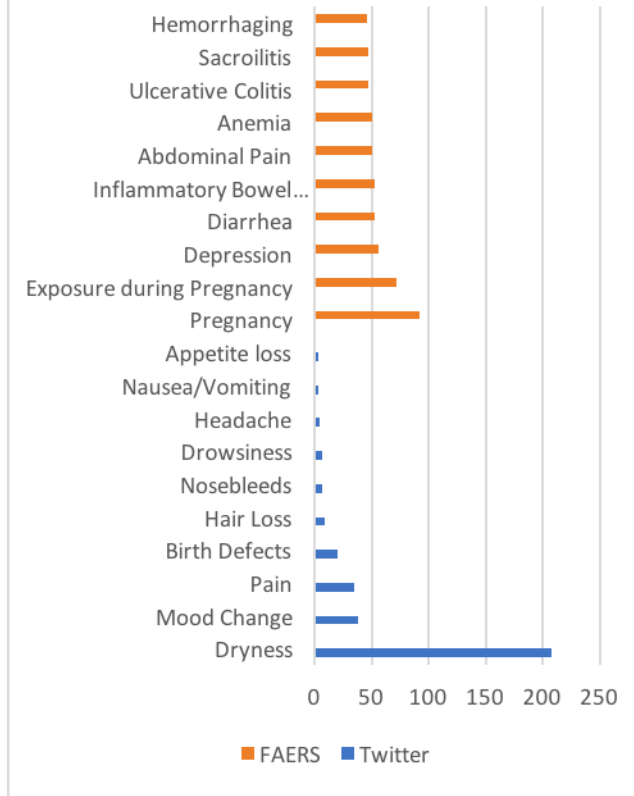
Isotretinoin (Accutane) was selected because it is prescribed as the top ten acne medication for moderate and severe acne. 300 tweets were randomly collected on 27 February 2017 for a sample with dates ranging from 26 April 2010 to 27 February 2017.

Analysis of Tweets

- We randomly selected 300 tweets from 26 April 2010 to 27 February 2017 for our sample
- 14 different adverse effects were reported with many of the tweets containing more than one adverse effects, giving us 361 total adverse effects
- 207 out of the 300 tweets reported severe dryness of skin and mucous membranes. 17 different adverse effects were reported.

Twitter Events (n=361)	Number of Events
Dryness	207
Mood Changes	38
Pain/Aching	34
Birth Defects	20
Hair Loss	9
Nose Bleeds	7
Drowsiness	6
Headaches	4
Nausea/vomiting	4
Loss of Appetite	3

Twitter versus FAERS Comparison Table



Analysis of FAERS

- FAERS data had 817 responses from 9 February 2011 to 27 February 2017
- The top 20 adverse effects were present in the database, but this study reviews only the top 10
- The most profound statistic reported 11 pregnancies, which is not feasible because Accutane cannot cause pregnancy

FAERS Events (n=817)	Number of Events
Pregnancy	92
Exposure	72
Depression	56
Diarrhea	53
Inflammation	52
Abdominal Pain	50
Anemia	50
Ulcerative Colitis	47
Sacroilitis	47
Hemorrhaging	46

Conclusion

When comparing ADEs from Twitter and FAERS data, FAERS concluded that pregnancy was the top ADE, which is not feasible. Because you are not allowed to get pregnant while on Accutane, these individuals may have been responding to birth defects that result from taking them while with child. Twitter data shows that dryness was the most reported ADE. This discrepancy may be due to FAERS participants being confused and unfamiliar with side effects. FAERS data represented ADEs that were chronic, while Twitter ADEs were acute. This difference may be due to individuals on Twitter not reporting embarrassing ADEs, also Twitter accounts for only 300 tweets compared to 817 FAERS reports. Something that would be interesting to investigate more on, are other drugs that can be used for acne without all the side effects of Accutane. We still question why healthcare providers prescribe Accutane despite such difficult ADEs imposed on both men and women.