

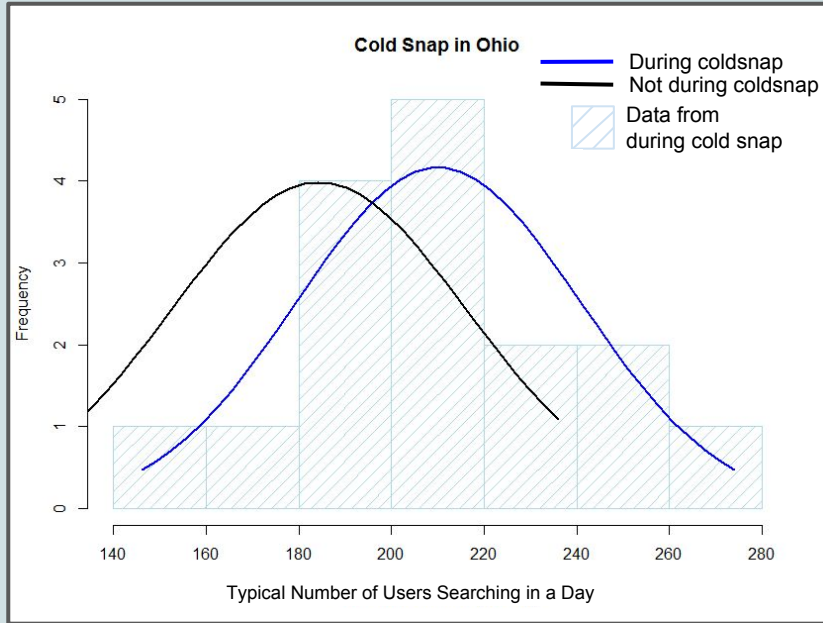


FROSTBIT

Take advantage of changing weather

By: Kathleen Fillingim, Kathy Guo, Mae Hutchison, Mohamed Meziane-Tani, and James White

Extreme Cold in 2015



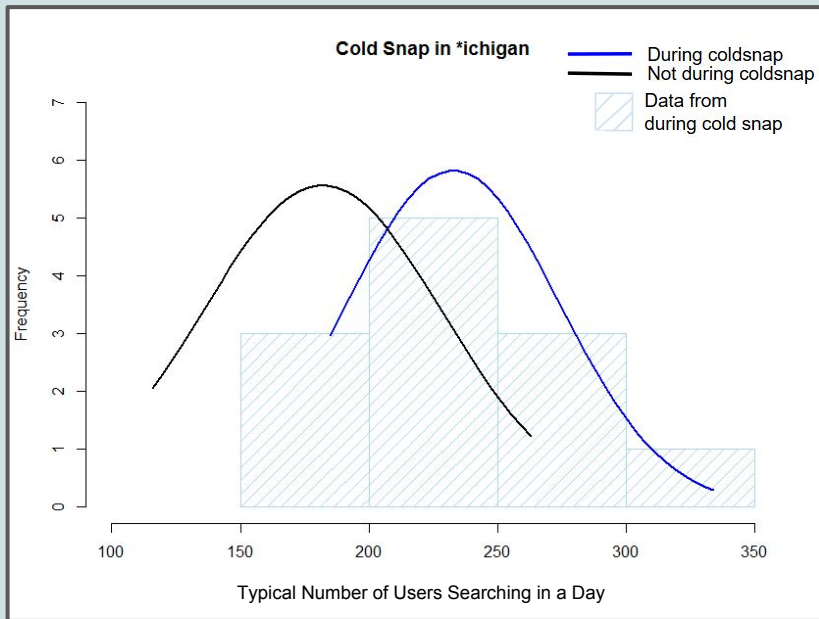
- February 2015 had a very severe cold snap for the eastern US.
- We analyzed the number of searchers during the cold snap (February 13-28) and immediately before and after the snap.
 - Median Normal = 189
 - Median Cold Snap = 209

T-test : $H_0: \mu_1 = \mu_2$ $H_A: \mu_1 \neq \mu_2$
P-value = 0.041

All weather data sourced from the National Weather Service



Going Deeper



T- Test: $H_0: \mu_1 = \mu_2$ $H_A: \mu_1 \neq \mu_2$

P-value = 0.0038

All weather data sourced from the National Weather Service

- That state up north showed even stronger results:
 - Median Normal = 176
 - Median Cold Snap = 226
- A group of control states without the cold snap showed no change:
 - P-value = 0.64
- This analysis can be broadened to other states



Relevance to Expedia and Limits to Data

- This data is **not perfect!** More research is encouraged.
- Recent research from multiple sources shows that cold snaps may be more common in the future¹.
- Expedia can craft their marketing to take advantage of these weather patterns.



[1] Cohen, Judah. "Recent Arctic amplification and extreme mid-latitude weather." *Nature Geoscience*, 2014.