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Background

- Epilepsy affects 1.2% of the total United States (US) population. Economic costs related to epilepsy are estimated at \$42 billion USD in 2010.¹
- Generic Anti-Seizure Medications (ASMs) are equally safe as brand ASMs.²
- In the last decade, the US and Europe have seen a significant shift towards generic ASMs, which now make up nearly 80% of prescriptions but only contribute to about 20% of the costs.³
- The past decade provides a crucial opportunity to study factors shaping ASM prices in a dynamic marketplace, including the impact of generics on branded ASMs, variations in pricing across formulations, and the influence of major events like the COVID-19 pandemic.

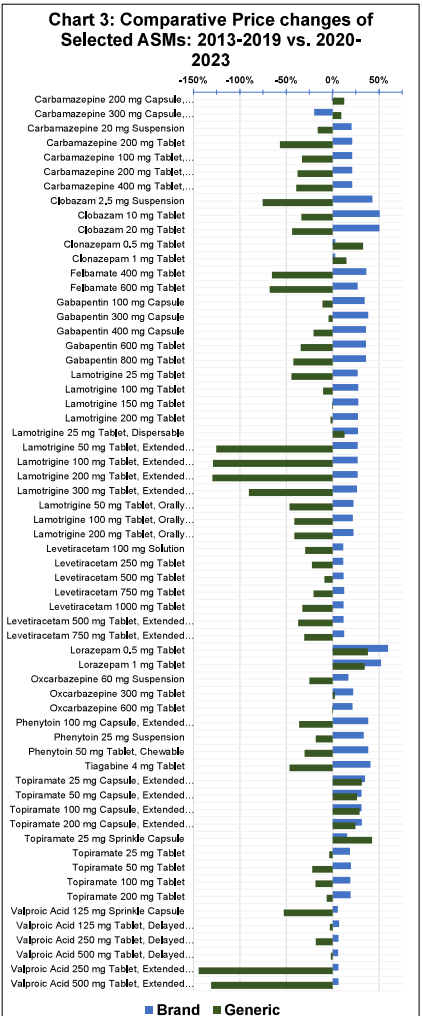
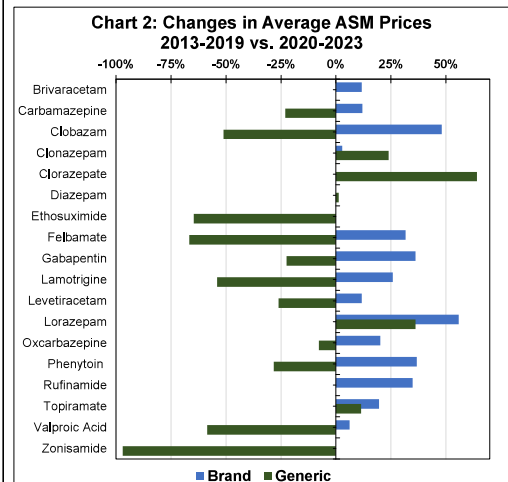
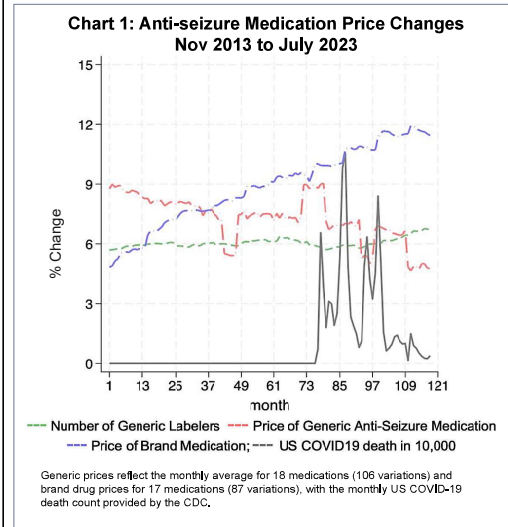
Methods

- The National Average Drug Acquisition Cost (NADAC) data from the Centers for Medicare and Medicaid Services (CMS) was obtained for 23 ASMs.
- The US Consumer Price Index (CPI) for Medicinal Drugs (seasonally adjusted) was used to account for inflation on ASM costs over time.
- ASM price was organized longitudinally by ASM id, month, with id specific to medication-formulation-strength-generic/brand
- The associations between number of generic labelers, patient expiration, and ASM costs were examined using ASM id-specific fixed effects multivariable regression with standard errors robust to heteroscedasticity.

Objectives

- We examined ASM price trends between Nov 2013 – July 2023, exploring:
- The association between the number of generic labelers and ASM costs
 - The effect of patent expiration on prices of the brand ASMs
 - Fluctuations in ASM price during the COVID-19 pandemic

Results



Results

- The average price of generic drugs decreased by 5.45% (p=0.001) when one more generic labeler entered the market.
- Within 6 months of the initial entry of generic ASM, the average price of brand drugs increased by 3.63% (p=0.004).
- During early COVID-19, there was an upward trend in average ASM prices, which, after 6 months, showed a downward trend in generic ASM prices.

Discussion

- Generic ASM prices dropped with new generic labelers' market entry, highlighting the competition's role in lowering medication costs.
- Brand ASM prices rose post-market exclusivity, suggesting a distinct pricing strategy warranting deeper analysis.
- COVID-19's effect on drug pricing suggests market adaptations to external pressures, including potential medication stockpiling.
- Future research should investigate specific brand ASMs causing disproportionate price rises and the impact of CMS negotiation tactics.

References

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