



Pilot Study Evaluating the Trends in Utilization of Compounded Products Pre- and Post- COVID-19 Pandemic

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Purpose

- There has been increased attention on compounding facilities by regulators, insurers, and citizens¹
- Compounded products are personalized treatments for patients who are not sufficiently treated with traditional products¹⁻³
- Prevalence of compound users was 1.1% of eligible commercially insured members in 2012 and 1.4% in 2013¹
- In this study we assess trends in the number of compounded products, the most common compounded products, and if there are changes in the products compounded during the COVID-19 pandemic.

Methods

- A cross-sectional study was completed using Komodo Health Map, a large national claims database
- The data include patients who received at least one COVID-related vaccine, test, or treatment from October 2015 to July 2022.
- Claims included in the analysis are those identified as paid, listed as compounded, and were filled in 2019, 2020, or 2021.
- Chi-Square and T-Tests were used to determine if there are differences between each year.

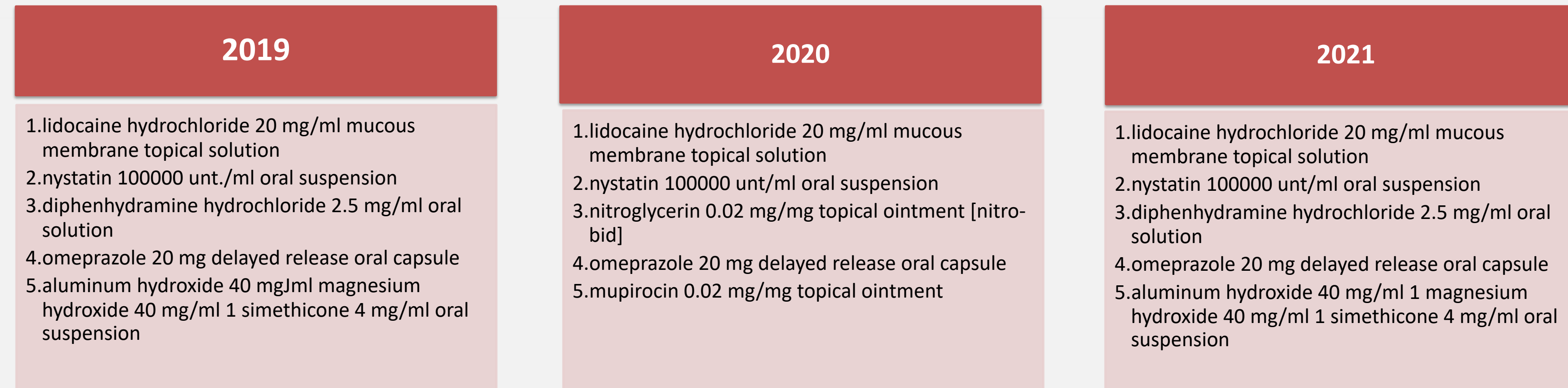
Results

- The prevalence of paid claims for compounded products was 0.00055% (14,101) in 2019, 0.00042% (11,551) in 2020, and 0.00048% (14,005) in 2021.
- Between 2019 and 2020 the number of compounded claims decreased 17.6% while the number of total claims increased by 9.01%.
- From 2020 to 2021 the number of claims for compounded products returned to pre-pandemic levels with a 21.24% increase.
- The average patient cost sharing for compounded products was \$42.57 (SD: \$60.02) in 2019, \$40.07 (\$80.36) in 2020, and \$42.61 (\$60.02) in 2021.

Table 1: Characteristics of claims included in the analysis

	Full Sample	Commercial	Public-funded	p-value
2019				
Total Claims	14,010	9,802	4,982	<0.01
Total Patients	7,505	5,021	2,484	<0.01
Compounds /Patient, mean (SD)	1.87 (2.30)	1.88 (2.16)	1.98 (2.57)	<0.01
Patient Pay/Rx, mean (SD)	\$42.57 (\$60.02)	\$49.37 (\$63.44)	\$30.08 (\$50.82)	<0.01
2020				
Total Claims	11,551	7,254	4,297	<0.01
Total Patients	5,964	3,933	2,031	<0.01
Compounds /Patient, mean (SD)	1.94 (2.44)	1.84 (2.18)	2.12 (2.86)	<0.01
Patient Pay/Rx, mean (SD)	\$40.07 (\$80.36)	\$45.50 (\$64.97)	\$30.91 (\$100.50)	<0.01
2021				
Total Claims	14,005	9,081	4,924	<0.01
Total Patients	7,504	5,020	2,484	<0.01
Compounds /Patient, mean (SD)	1.87 (2.31)	1.81 (2.16)	1.98 (2.57)	<0.01
Patient Pay/Rx, mean (SD)	\$42.61 (\$60.02)	\$49.40 (\$63.43)	\$30.07 (\$50.84)	<0.01

Figure 1: Top 5 Compounded Products 2019-2021



Conclusion

- There was a significant decrease in the number of claims for compounded products between 2019-2021
- Fewer patients received compounded products following the COVID-19 pandemic.
- We found no change in the number of compounded claims for hydroxychloroquine and ivermectin, though in 2020
- There was a notable increase in the number of claims for naltrexone hydrochloride.

References

1. McPherson, T., Fontane, P., Iyengar, R., & Henderson, R. (2016). Utilization and Costs of Compounded Medications for Commercially Insured Patients, 2012-2013. *Journal of managed care & specialty pharmacy*, 22(2), 172–181.
2. Wilson M. (2016). Sterile Compounding Pharmacies: States That Do and Do Not Require Compliance With USP <797> Versus FDA 483s. *Therapeutic innovation & regulatory science*, 50(3), 279–303.
3. Ahearn, D. G., & Stulting, R. D. (2018). Moulds associated with contaminated ocular and injectable drugs: FDA recalls, epidemiology considerations, drug shortages, and aseptic processing. *Medical mycology*, 56(4), 389–394. <https://doi.org/10.1093/mmy/myx070>

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