

## Short Communication

# Strategies to reduce healthcare costs: what medical conditions are US seniors treating with Mexican pharmaceuticals?

Matthew Dalstrom<sup>1,\*</sup>, Ryan Chung<sup>2</sup> and Lynette M. Castronovo<sup>1</sup>

<sup>1</sup>Graduate Department, Saint Anthony College of Nursing, Rockford, IL, USA

<sup>2</sup>University Assessment and Testing, Oklahoma State University, Stillwater, OK, USA

\*Correspondence: Matthew Dalstrom, Saint Anthony College of Nursing, 3301 North Mulford Rockford, IL 61114, USA.

Tel: 815-282-7900 X 27632; Fax: 815-282-7901; Email: [Matthew.d.dalstrom@osfhealthcare.org](mailto:Matthew.d.dalstrom@osfhealthcare.org)

Received March 30, 2020; Accepted October 12, 2020.

## Abstract

**Objectives** The high price of pharmaceuticals in USA has caused patients, health insurance plans and policy makers to explore the possibility of purchasing pharmaceuticals in Mexico. However, it is unclear if the practice would lower costs and whether US patients would be willing to purchase pharmaceuticals in Mexico. Focusing on seniors who spend the winter along the Texas/Mexico border, Winter Texans, the purpose of this study was to identify their most common health problems and whether they used Mexican pharmaceuticals to manage those problems.

**Methods** Data for this cross-sectional pilot study were collected through sending an online survey to 1040 seniors on the Winter Texan Migrant Panel. A total of 311 completed the survey and the data were analysed.

**Key findings** The most common medical conditions were pain (69%), high cholesterol (37%) and arthritis (32%). Half of the respondents purchased a total of 293 Mexican pharmaceuticals with 77.5% indicating that the lower cost influenced their decision. The most frequently treated conditions with Mexican pharmaceuticals were infections (37%), pain (28%) and acid reflux (24.4%).

**Conclusions** Seniors did not treat their most common medical conditions with Mexican medication, except for pain. Instead, they used it for more minor and acute problems. This suggests that the decision of where to purchase a pharmaceutical is complex and not exclusively dependent on cost. Therefore, legislation and health insurance plans that encourage seniors to purchase pharmaceuticals abroad might be successful for lowering the cost of treatment for some medical conditions but not others.

**Keywords:** pharmaceutical industry; health policy; international

Patients in the USA pay more for prescription medication than in almost any other country.<sup>[1]</sup> As a result, it is estimated that approximately 19 million adults in the USA have purchased medications abroad.<sup>[2]</sup> Historically, the practice has primarily consisted of individuals with or without health insurance,<sup>[3, 4]</sup> but now it is also being considered by insurance companies and state governments as a way to control costs. The most notable example is Utah's Public Employees Health Plan,<sup>[5]</sup> but they are not alone with 23 states

considering drug importation policies in 2020.<sup>[6]</sup> However, it is unclear how successful these policies will be in lowering overall costs.

Research on foreign pharmaceuticals has primarily focused on how many people purchase medications, the types and the risks.<sup>[7, 8]</sup> However, the medical conditions that people treat with pharmaceuticals purchased outside of the USA are understudied, especially among seniors. According to Simpson,<sup>[9]</sup> 50% of Winter Texans, retirees who spend the winter in Texas, purchase pharmaceuticals in

Mexico. The purpose of this study was to identify their most common health problems and whether they used pharmaceuticals purchased in Mexico to manage those problems. Understanding the preferences of this group of seniors will lend some insight into the complexity of pharmaceutical purchasing patterns among seniors. Furthermore, as foreign pharmaceuticals become an increasingly popular solution to high pharmaceutical costs, the results of this study will assist policy makers, local governments and insurance companies in determining what types of pharmaceuticals seniors might be willing to purchase outside of the USA.

## Methods

Participants for this cross-sectional pilot study were recruited through the Winter Texan Migrant Panel, which is maintained by the University of Texas Rio Grande Valley. To be included in the panel, participants must have completed the *Winter Texan Market Survey*, which is distributed biannually in the Lower Rio Grande Valley. In 2017, 1040 recruitment emails were sent with links to an online survey, which was developed based upon previous research.<sup>[3, 4, 7]</sup> Questions included their personal health history, use of Mexican medication and demographics. Additional information was collected on adherence, adverse drug events and strategies to purchase Mexican medication which is reported elsewhere. Data were analysed using descriptive statistics. The study was approved by the OSF Saint Anthony Medical Center Institutional Review Board.

## Results

A total of 311 people completed the survey, most of which who lived in the upper Midwest (29.8%). A majority (92%) were aged 61–75 years old with an average annual income of 60,000 and a similar distribution of males and females. Less than 1% were uninsured, and 92% had prescription drug coverage either through private insurance (47.5%), Medicare Part D (32%) or Medicare Part C (12.5%). Nevertheless, of the 156 who reported using Mexican pharmaceuticals, 77.5% strongly agreed that it was because the medication was less expensive in Mexico.

The top five medical conditions reported by all Winter Texans are reported in Table 1, with pain (all types) as the most common health problem. Within the group of individuals who used Mexican medication, the most frequently reported conditions were ageing eye followed by high cholesterol and then pain. Of the 156 individuals who purchased Mexican medication, 135 identified the medication(s) purchased in Mexico. In total, 293

medications were purchased in Mexico during the preceding six months (range 1–6, mean 2.17 per person); however, the reason for purchase was only indicated for 246 medications. Of those, the most common use of Mexican medicine was to treat infections. Within the top five medical conditions reported by those who used Mexican medicine, the only one that was treated by Mexican medicine was pain (all types). The other most frequently cited medical conditions by Winter Texans, were treated much less frequently with Mexican medicine; high cholesterol (6.7%), hypertension (7.4%), erectile dysfunction (5.9%), diabetes (5.2%) and ageing eye (0.74%).

## Discussion

Results from the survey illustrate that while half of the survey respondents have used Mexican pharmaceuticals, they do not purchase them to treat their most commonly reported medical conditions aside from pain. This is despite the fact that 83% said medication in Mexico works just as good as the medication that they can purchase in the USA. Instead, they primarily purchased medications for more acute and/or minor problems such as infections, acid reflux and colds/flu. This distinction is important because if cost was the primary catalyst for the practice, then it would be expected that the most frequently reported medical conditions such as high cholesterol, would be treated with Mexican medication. While the survey did not ask about co-pays and deductibles, it has been reported elsewhere that the cost of many pharmaceuticals in Mexico can be less than what someone might pay with Medicare, although that depends on their insurance coverage.<sup>[4]</sup> Moreover, Winter Texans often purchased medication that is covered by most insurance plans and already has low or no co-pays such as antibiotics, indicating that easy access is also an important component. In addition, the severity of the conditions treated with Mexican medication was lower than that of US medication, possibility suggesting perceptions of the quality are important for some, but not all medical conditions as other research has reported.<sup>[4, 10]</sup> This might indicate that decisions to purchase medication abroad are more complex and are dependent on a variety of variables such as insurance coverage, access and cultural perceptions.

This pilot study has several limitations including the cross section design, small sample size, reliance on recall data and a focus on the Winter Texan population, which might not be representative of other groups of seniors. Future research should use a nationally representative sample to ascertain the medical conditions that seniors would be willing to treat with foreign pharmaceuticals and explore their medical decision making process.

**Table 1** Most frequently reported medical conditions by use of Mexican medication

Overall medical conditions	Frequency (%) (N = 284) <sup>a</sup>	Conditions of people who used Mexican medicine	Frequency (%) (n = 156)	Conditions treated with Mexican medicine	Frequency (%) (n = 135) <sup>b</sup>
Pain (all types)	196 (69)	Ageing eye	70 (45)	Infections	50 (37)
High cholesterol	104 (37)	High cholesterol	32 (21)	Pain (all types)	38 (28)
Arthritis	92 (32)	Pain (all types)	20 (13)	Acid reflux	33 (24.4)
Ageing eye	72 (25)	Erectile dysfunction	19 (12)	Skin disorders	11 (8.1)
Hypertension	63 (22)	Depression	12 (8)	Colds/flu	11 (8.1)

<sup>a</sup>Participants include both those who use and do not use Mexican medication. They could select more than one current medical condition and only 284 of the 311 people included in the survey answered this question.

<sup>b</sup>One hundred and thirty-five participants provided a list of 246 conditions treated with Mexican medicine.

## Conclusion

The results from this study suggest that seniors prefer purchasing some types of medications abroad but not others based upon the health problem. Therefore, health insurance plans and legislation that encourages purchasing medication abroad might be successful in lowering the cost of treating certain medical conditions, but patients might be unwilling to purchase pharmaceuticals abroad for others.

## Acknowledgements

All authors contributed to this study and reviewed and approved the final version of the manuscript.

## Author Contributions

MD and RC participated in the study design, data collection, analysis, and prepared the manuscript draft. LC participated in the study design, analysis, and reviewed the final version of the manuscript.

## Funding

This work was supported by the Saint Anthony College of Nursing June E. Dilling Fund.

## Conflict of Interest

None declared.

## References

1. U.S. Department of Health and Human Services. Comparison of U.S. and International Prices for Top Medicare Part B Drugs by Total Expenditures. <https://aspe.hhs.gov/system/files/pdf/259996/ComparisonUSInternationalPricesTopSpendingPartBDrugs.pdf> (10 November 2019, date last accessed).
2. Bluth R. Faced With Unaffordable Drug Prices, Tens of Millions Buy Medicine Outside U.S. <https://khn.org/news/faced-with-unaffordable-drug-prices-tens-of-millions-buy-medicine-outside-u-s/> (12 October 2019, date last accessed).
3. de Guzman GC, Khaleghi M, Riffenberg RH *et al.* A survey of the use of foreign-purchased medications in a border community emergency department patient population. *J Emerg Med* 2007; 33: 213–21. <https://doi.org/10.1016/j.jemermed.2007.02.019>
4. Dalstrom MD. Winter Texans and the re-creation of the American medical experience in Mexico. *Med Anthropol* 2012; 31: 162–77. <https://doi.org/10.1080/01459740.2011.589417>
5. Utah State Legislature. Health Insurance Right to Shop Amendments. <https://le.utah.gov/~2018/bills/static/HB0019.html>. (30 October 2019, date last accessed).
6. National Academy for State Health Policy. 2020 State Legislative Action to Lower Pharmaceutical Costs. <https://nashp.org/rx-legislative-tracker/> (29 March 2020, date last accessed).
7. Homedes N, Ugalde A. Mexican pharmacies: benefits and risks for border residents in the United States of America and Mexico. *Rev Panam Salud Publica* 2013; 33: 196–204. <https://doi.org/10.1590/s1020-49892013000300006>
8. Su D, Richardson C, Wen M *et al.* Cross-border utilization of health care: evidence from a population-based study in south Texas. *Health Serv Res* 2011; 46: 859–76. <https://doi.org/10.1111/j.1475-6773.2010.01220.x>
9. Simpson P. The Winter Texan Market Report 2015–2016. [https://www.utrgv.edu/tourism/\\_files/documents/reports/wt-2015.pdf](https://www.utrgv.edu/tourism/_files/documents/reports/wt-2015.pdf) (10 October 2019, date last accessed).
10. Hoffman L, Crooks VA, Snyder J. Pills in paradise: exploring international lifestyle and retirement migrants' perceptions of the pharmaceutical sector on Cozumel Island, Mexico. *Health Place* 2017; 47: 139–46. <https://doi.org/10.1016/j.healthplace.2017.08.004>