

AMERICANS' PERCEPTION AND USE OF ONLINE PHARMACIES

ASOP Foundation 2023 Consumer Survey

EXECUTIVE SUMMARY

In September 2023, ASOP Global Foundation commissioned Abacus Data to survey 1,500 Americans about their perceptions and use of online pharmacies. The survey also measured the factors that influence consumer buying decisions. This is the third survey that ASOP Global Foundation has undertaken in the past four years, allowing ASOP to track year-over-year changes in Americans' exposure to online pharmacies and the factors that influence their decision to buy their medications online.

- More Americans are buying prescription medication online than ever. Most are new to online pharmacies within the last 3 years and have become regular customers who use them to meet the majority of their medication needs.
 - 52% of Americans aged 18 and older have previously used an online pharmacy - a 10-percentage-point increase compared to 2021 and a 17-percentage-point increase compared to 2020.
 - 71% of Americans report they first started using online pharmacies in the past 1-3 years.
 - 85% of Americans with online pharmacy experience are currently using an online pharmacy to fill one or more medications.
 - 61% of Americans with online pharmacy experience report using them to purchase most or all their prescription medications.

- Recent nationwide drug shortages and changes in access are two key factors likely to fuel a continued rise in online medication purchasers.
 - 66% of Americans say they would likely purchase medication unavailable at their local brick-and-mortar pharmacy if they found it online. 49% of those *without* prior online pharmacy experience say they would be likely to purchase a medication online if unavailable at their local pharmacy, indicating access could be a strong motivator for those who haven't yet purchased medications online.
 - 59% of Americans say they would be comfortable ordering controlled substances from an online pharmacy if unavailable at their local pharmacy.
 - 47% of Americans with online pharmacy experience would be open to purchasing prescription medicines from an online source not approved by a U.S. regulator if it *gave access to medicines they couldn't otherwise access*.

- Driven by cost and convenience, Americans are willing to take what they believe are calculated risks.
 - Convenience (59%) and cost-savings (55%) remain the most frequently cited reasons Americans have or would use online pharmacies – and both trump safety concerns.
 - 60% of Americans with online pharmacy experience would be open to purchasing prescription medicines from an online source not approved by a U.S. regulator if it made ordering medicines *more convenient*.
 - 55% of Americans with online pharmacy experience would be open to purchasing prescription medicines from an online source not approved by a U.S. regulator if it *offered more cost savings*.

- This is particularly alarming because even as harms resulting from medication bought online are increasing among those who report using online pharmacies, most Americans are unaware of these risks, and their awareness is decreasing.
 - 24% of Americans with prior experience using online pharmacies report having previously been exposed to harmful, counterfeit, or substandard medication received from an online pharmacy, a 7-percentage-point increase from 2021.
 - Yet, even as more consumers are buying prescriptions online, fewer (44%) Americans describe taking medication purchased online as risky, a 10-percentage-point decrease from 2021.
- Americans who purchase their medications online often make dangerous, false assumptions about the safety, oversight, and compliance of online pharmacies.
 - 44% of Americans falsely believe that online pharmacies do not need a prescription from a healthcare provider to dispense the medication for certain prescription medicines. This number jumps to (53%) among those who have previously purchased prescription medicines online.
 - 54% of Americans – up from 45% in 2021 – falsely believe all websites offering healthcare services/prescription medications to Americans via the Internet have been approved by the FDA or state regulators. This misperception is even higher (68%) among those who have previously purchased prescription medicines online, up from 59% in 2021.
 - 47% of Americans falsely believe that only safe, verified websites selling prescription medications appear on the first page of search engine results. Again, this misconception is higher (61%) among those who have previously purchased prescription medicines online.
- When it comes to Controlled Substances, Americans are comfortable establishing a relationship with a healthcare provider solely through telehealth appointments but many Americans believe there should be some limitations on the circumstances in which healthcare providers can prescribe controlled substances virtually.
 - 69% of Americans are comfortable being prescribed a controlled substance by a healthcare provider whom they meet exclusively through telehealth appointments.
 - 34% of Americans support telehealth prescribing of controlled substances after a patient-provider relationship has been established and 20% of Americans would support telehealth prescribing but not of all controlled substances.

INTRODUCTION

In the past three years, the U.S. healthcare landscape has rapidly and dramatically changed. In this short time period, Americans have not only lived through the first pandemic in over a century (COVID-19), they've also observed the creation of novel vaccines and antiviral medications in record time, the swift adoption of telehealth platforms by most healthcare providers, and the temporary loosening of federal laws mandating what were previously tight controls over the remote prescribing of controlled substances. These events have fundamentally transformed Americans' perception of how and where they can safely source healthcare and medical products, in some ways to their benefit and in other ways to their detriment.

Initially forced to accept virtual healthcare providers and online medical product retailers out of necessity, Americans have since become more trusting of these new technologies, and many have become repeat customers, swayed by the convenience and cost-savings they provide. However, Americans' perception of risk has also been redefined by the pandemic. To find medications and other healthcare products in high demand, Americans had to become resourceful, often looking online for answers. And while some of the impacts of the COVID-19 pandemic have abated, the strain on the US pharmaceutical supply chain remains, creating what is now a devolving drug shortage crisis. As of 2Q 2023, the US had 209 active, ongoing drug shortages, the highest in over a decade.^{1, 2} Among the drugs in shortage were essential medicines, including chemotherapy drugs and antibiotics, as well as transformative new therapies for obesity and diabetes.^{1, 2, 3} Multiple reports have demonstrated the long-term impact just one medication shortage can have on patients. The average drug shortage impacts at least half a million consumers and lasts 1.5 years, with shortages of critical medicines often lasting longer.²

What few Americans also realize is that counterfeit and illegal drug sales are also on the rise, and the U.S. is far from immune. Incidents of pharmaceutical counterfeiting, illegal diversion, and theft across 141 countries increased by 50% from 2018 to 2022, and North America ranked highest for such incidents.^{4, 5} While Americans benefit from a highly regulated system of drug distribution designed to prevent these medicines from entering the supply chain, online there is significantly less transparency and accountability, which means greater risk for the growing number of Americans who have recently turned to ordering their prescription medications online. And when medicines are inaccessible, patients may discontinue treatment, seek alternatives, or turn to grey market sources, including illegal online pharmacies, where they are more likely to be exposed to counterfeit, substandard, or unapproved products.

To better understand this rapidly changing landscape and the impact it has on the prevalence and patterns of online pharmacy usage, consumer awareness of associated risks, and other trends, the ASOP Global Foundation conducted a survey of 1,500 Americans. This is the third such survey that the Foundation has undertaken in the past four years, allowing ASOP to track year-over-year changes in Americans' exposure to online pharmacies and the factors that influence their decision to buy online.^{6, 7}

¹ American Society of Health-System Pharmacists (ASHP). (2023). *Severity And Impact of Current Drug Shortages*. <https://www.ashp.org/-/media/assets/drug-shortages/docs/ASHP-2023-Drug-Shortages-Survey-Report.pdf>

² United States Senate Committee on Homeland Security and Governmental Affairs. (2023). *Short Supply: The Health and National Security Risks of Drug Shortages*. <https://www.hsgac.senate.gov/wp-content/uploads/2023-06-06-HSGAC-Majority-Draft-Drug-Shortages-Report.-FINAL-CORRECTED.pdf>

³ Blum, D. (2023, October 5). The Wegovy Shortage Drags On, Leaving Patients in Limbo. *The New York Times*. <https://www.nytimes.com/2023/10/05/well/live/wegovy-shortage-ozempic-fda.html>.

⁴ Pharmaceutical Security Institute (PSI). (n.d.) *Incident Trends*. Retrieved November 29, 2023, from <https://www.psi-inc.org/incident-trends>

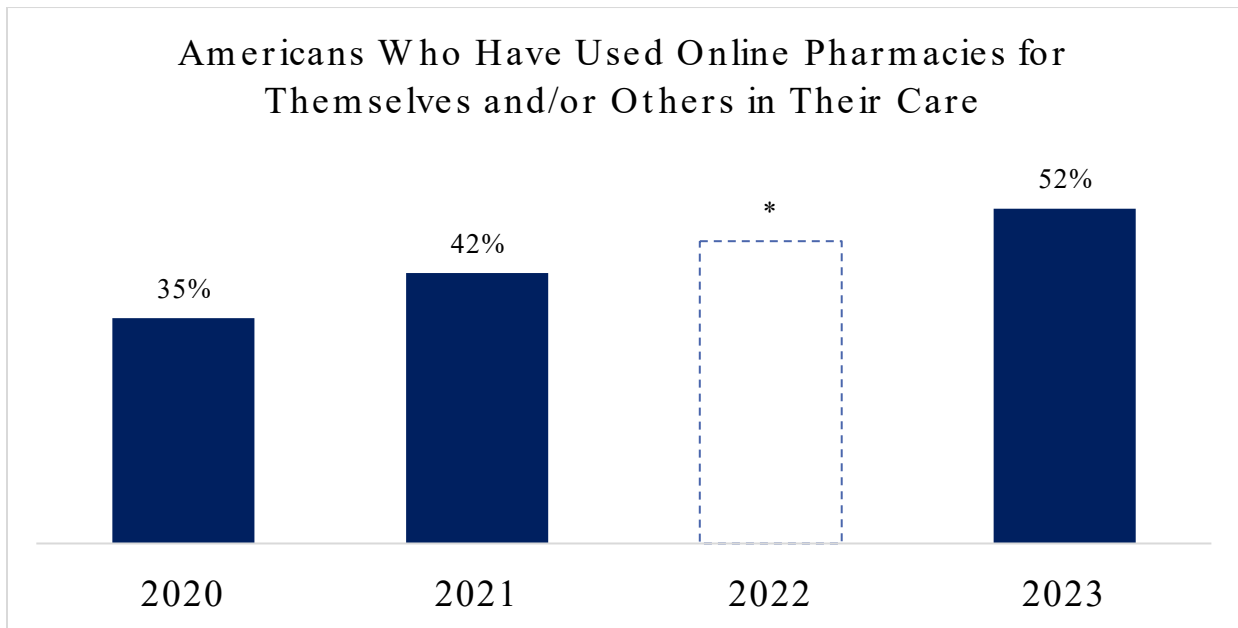
⁵ Pharmaceutical Security Institute (PSI). (n.d.) *Geographical Distribution*. Retrieved November 29, 2023, from <https://www.psi-inc.org/geographic-distribution>

⁶ Alliance for Safe Online Pharmacies Global Foundation (ASOP Global Foundation). (2021). *2021 Survey: American Perceptions and Use of Online Pharmacies*. ASOP-Global-Foundation-2021-Consumer-Behavior-Survey-Key-Findings_Final-7.9.2021.pdf ([asopfoundation.org](https://www.asopfoundation.org))

⁷ Alliance for Safe Online Pharmacies Global Foundation (ASOP Global Foundation). (2020). *2020 National Survey On American Perceptions of Online Pharmacies*. Survey-Key-Findings_October-2020.pdf ([asopfoundation.org](https://www.asopfoundation.org))

HOW MANY AMERICANS USE PRESCRIPTION MEDICATIONS AND ONLINE PHARMACIES

- While prescription medication use in the US has remained relatively unchanged for the last three years, the number of Americans who are buying their medication online has risen quickly. For the first time in the history of this survey, the number of Americans with prior experience using an online pharmacy outnumber those without.
 - 68% of Americans 18 years old and above currently take prescription medications (a 6-percentage-point increase compared to 2021), with the average American taking 3.5 prescription medications daily.
 - As expected, the prevalence of prescription medication use and the number of prescription medications taken daily increases with age. Prescription medication use is also more prevalent among those with a higher level of education and those who report a higher household income. However, prescription medication use did not differ significantly based on gender, region, or community.
- This year, 52% of Americans aged 18 and older report having previously used an online pharmacy either for themselves and/or someone in their care, which is a 10-percentage-point increase compared to 2021 and a 17-percentage-point increase compared to 2020.
- Of those Americans actively using online pharmacies, 71% report they first started using online pharmacies in the last 1-3 years, suggesting that online pharmacies have seen a recent surge in popularity and most Americans who are currently using them are relatively inexperienced.



* No ASOP Foundation conducted in 2022..

WHO USES ONLINE PHARMACIES

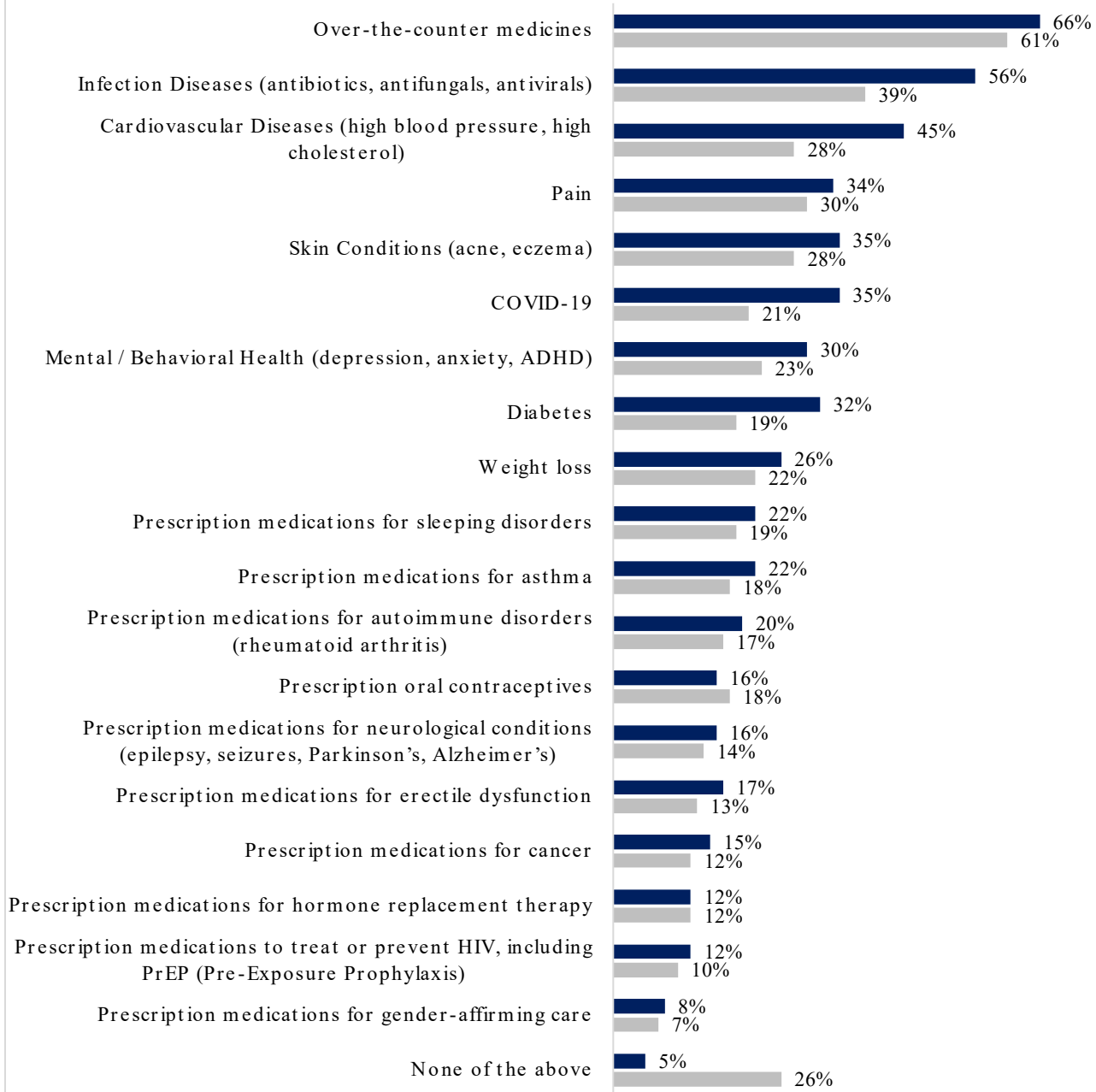
- Consistent with 2021 survey results, online pharmacy use is not concentrated in just one group. Men and women of all ages, geographical locations, communities, education levels, and socioeconomic status have used online pharmacies.
- Exposure to online pharmacies has also increased across all these groups.

HOW DO AMERICANS FIND & USE ONLINE PHARMACIES

- **Americans use multiple resources (2.5 on average) to find their online pharmacy but most rely on healthcare providers, with pharmacists playing an increasingly important role.**
 - Consistent with 2021 survey results, healthcare providers remain one of the most popular resources for Americans to find their online pharmacies (36%).
 - However, this year, over half (53%) of online pharmacy users credited pharmacists with helping them find their online pharmacy.
- **Once Americans use online pharmacies, most become regular customers and use them consistently.**
 - 85% of Americans with online pharmacy experience are currently using an online pharmacy to fill one or more medications.
 - 61% of Americans with online pharmacy experience report using them to purchase most or all of their prescription medications.
- **Most Americans who have prior experience with online pharmacies are comfortable using them to purchase multiple medications, including those that would need to be taken daily as well as those needed for acute conditions.**
 - When asked what types of prescription medications they would feel comfortable purchasing online, those with prior online pharmacy experience selected an average of 4.7 different types of medications.
 - Many express comfort using online pharmacies to fill medications they would need to take daily, such as medications for cardiovascular diseases, pain, mental and behavioral health, and diabetes, as well as medications to treat acute conditions, such as infectious diseases and COVID-19.

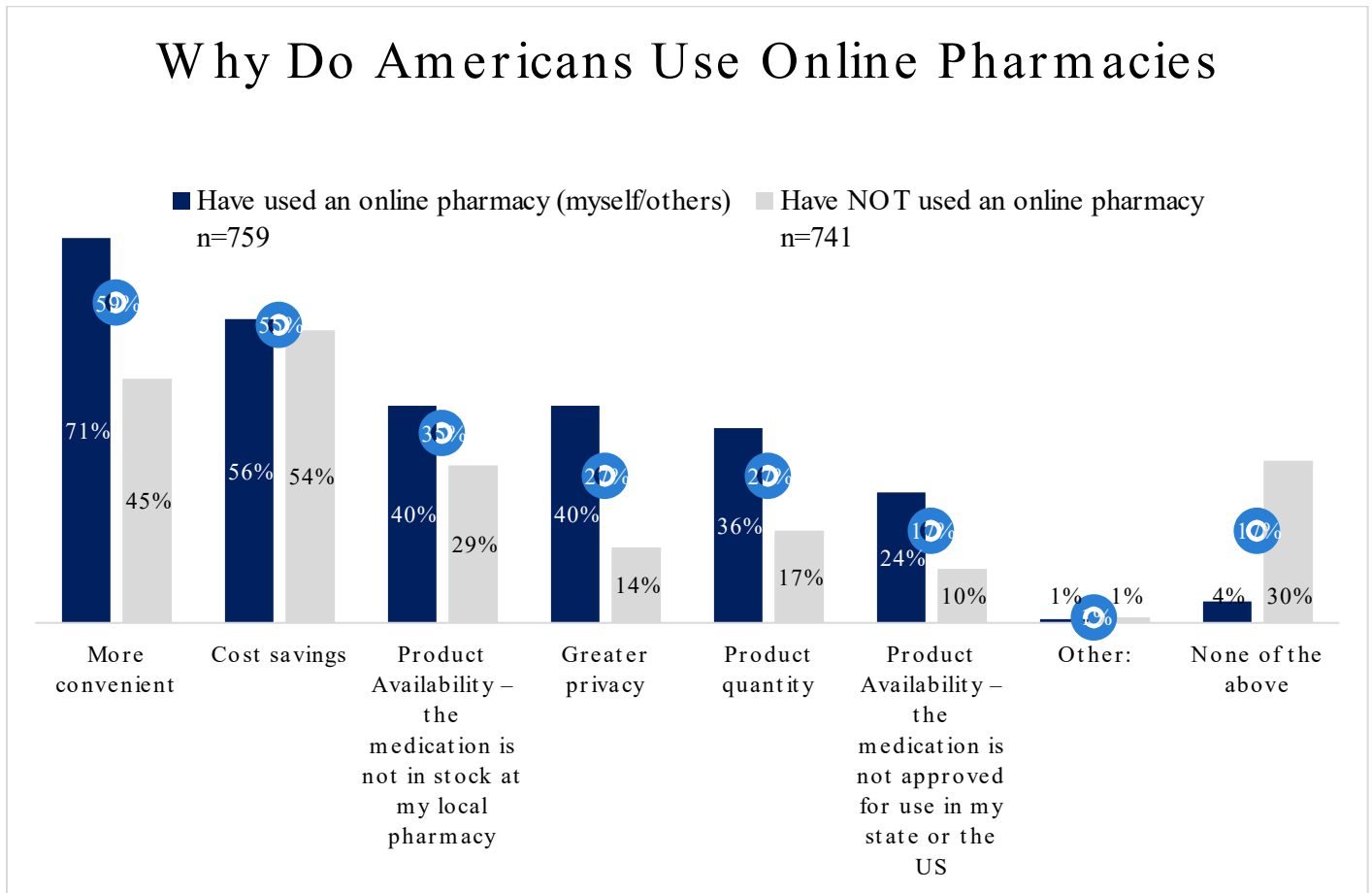
What Types of Medications are Americans Comfortable Purchasing Online

■ Have used an online pharmacy (myself/others) n=759
 ■ Have NOT used an online pharmacy n=741



WHY DO AMERICANS USE ONLINE PHARMACIES

- Consistent with 2021 survey results, convenience (59%) and cost-savings (55%) remain the most frequently cited reasons Americans have or would use online pharmacies, but most Americans cite multiple reasons.
 - Convenience is by far the most frequently cited reason (71%) those with prior online pharmacy experience have purchased medications online.
 - In contrast, cost-savings is the most frequently cited driver (54%) those who haven't yet used an online pharmacy would consider using one.

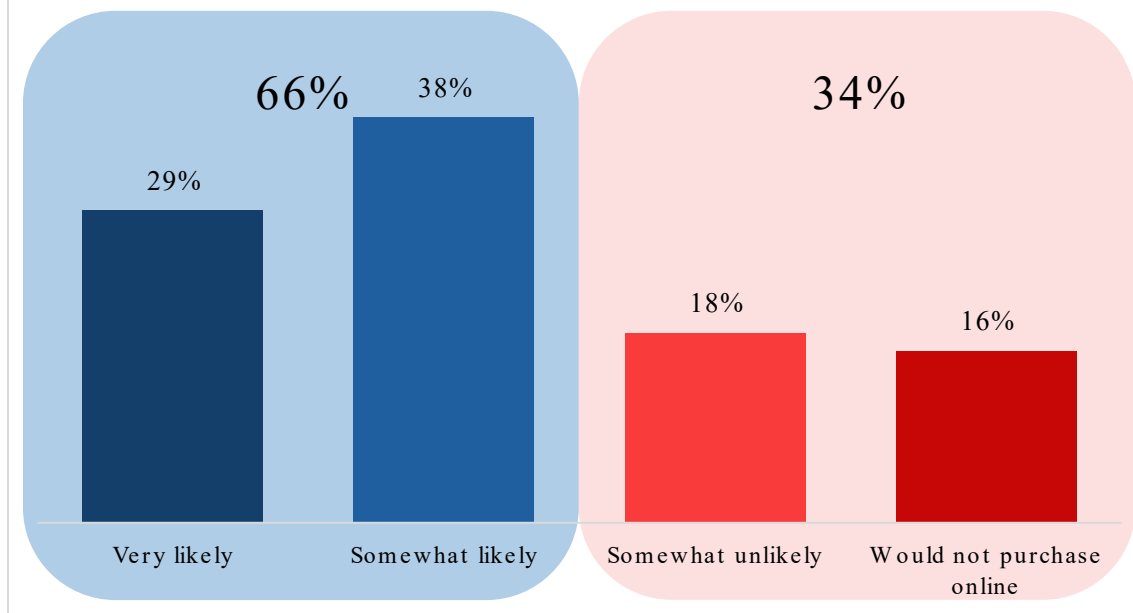


MEDICATION SHORTAGES ALSO LIKELY TO MOTIVATE AMERICANS TO BUY ONLINE

- While only a third of Americans count local shortages of their medication as a reason they have or would buy medication online, the vast majority of Americans would buy online if their medication were not available locally.
 - 66% of Americans say they would be likely to purchase medication that was unavailable at their local pharmacy if they found it online.
 - Notably, 49% of those *without* prior online pharmacy experience reported they would be likely or very likely to purchase medication that was unavailable at their local pharmacy if they found it online.

If a prescription medication that you or someone in your care needed was not available at your local pharmacy, how likely would you be to purchase the medication if you found it online?

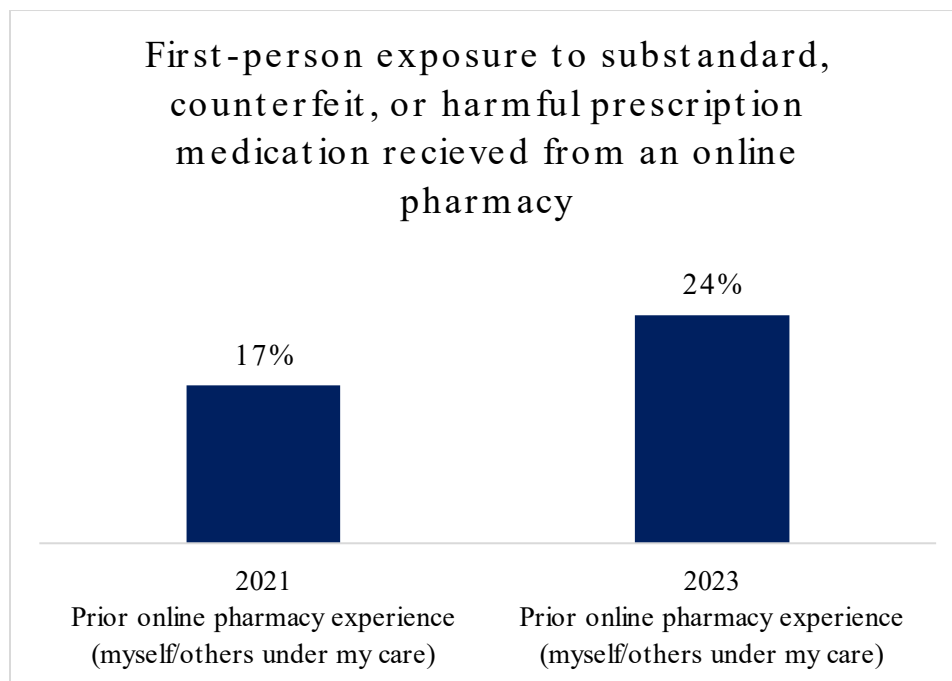
All Respondents (n = 1500)



AWARENESS OF AND EXPOSURE TO RISKS

- **Most Americans who use online pharmacies don't consider them very risky.**
 - Approximately half (53%) of Americans with online pharmacy experience describe the risk of using medications purchased online as not too risky or not risky at all. In comparison, 33% of Americans without prior online pharmacy experience describe using medications purchased online as not risky or not too risky.
 - When asked how much risk they would be willing to accept in exchange for the convenience and savings of purchasing online, 23% of those who have previously used online pharmacies said they would accept high to very high levels of risk.
- **Americans who use online pharmacies are open to taking certain risks in exchange for convenience, cost-savings, and access.**
 - 60% of Americans who have used online pharmacies would be open to purchasing prescription medicines from an online source not approved by U.S. regulators if it made ordering medicines more **convenient**.
 - 55% of Americans who have used online pharmacies would be open to purchasing prescription medicines from an online source not approved by U.S. regulators if it offered more **cost-savings**.

- 47% of Americans who have used online pharmacies would be open to purchasing prescription medicines from an online source not approved by U.S. regulators if it **gave access to medicines they couldn't otherwise access**.
- Americans who use online pharmacies may be willing to take these risks because the majority believe the most likely risk of using an online pharmacy is not receiving the medication on time (39%), compared to 31% who say it's likely their medication will be falsified.
- **This is concerning because while exposure to adverse events is *increasing* among those who purchase prescription medication online, awareness of and perception of these risks among the general U.S. population is *decreasing*.**
 - 24% of Americans with prior experience using online pharmacies report having previously been exposed to harmful, counterfeit, or substandard medication received from an online pharmacy, a 7-percentage-point increase from 2021.[†]
 - Despite this increase in first-hand exposure to harms, only 17% of respondents report hearing about adverse effects from drugs purchased online via the news media—relatively unchanged from 2021.
 - 44% of respondents describe taking medication purchased online as very or somewhat risky, a 10-percentage-point decrease from 2021.



[†] 2021 survey results were retroactively analyzed to determine the prevalence of self-reported exposure to substandard, counterfeit, or harmful medication received from an online pharmacy among those with online pharmacy experience.

WHAT DO AMERICANS KNOW ABOUT ONLINE PHARMACIES

- **The majority of Americans who use online pharmacies make dangerous assumptions about the general safety, oversight, and compliance of the prescription medicine sellers they encounter on the Internet.**
 - 54% of Americans falsely believe all websites offering healthcare services/prescription medications to Americans via the Internet have been approved by the FDA or state regulators. This misconception is even higher (68%) among those who have previously purchased prescription medicines online.
 - 47% of Americans falsely believe that only safe, verified websites selling prescription medications appear on the first page of search engine results. This misconception is even higher (61%) among those who have previously purchased prescription medicines online.
 - 44% of Americans falsely believe that for certain prescription medicines, online pharmacies do not need a prescription from a healthcare provider to dispense the medication. This misconception is even higher (53%) among those who have previously purchased prescription medicines online.

WHAT AMERICANS WANT TO KNOW ABOUT THEIR ONLINE PHARMACY

- For the majority of Americans, it is important that online pharmacies dispense medicines approved for use in the U.S., are licensed to operate in at least one U.S. state, and are transparent about from where their medications ship. This is even more important among those who have previously used online pharmacies.
 - 86% of those who have used online pharmacies say it is important that the medicines they purchase are **approved for use in the U.S.** vs. 72% of those who have never used an online pharmacy
 - 83% of those who have used online pharmacies say it is important to them that their online pharmacy is **licensed in at least one U.S. State** vs. 72% of those who have never used an online pharmacy
 - 60% of those who have used online pharmacies say **knowing from where their medication ships** is important to them vs. 52% of those who have never used an online pharmacy

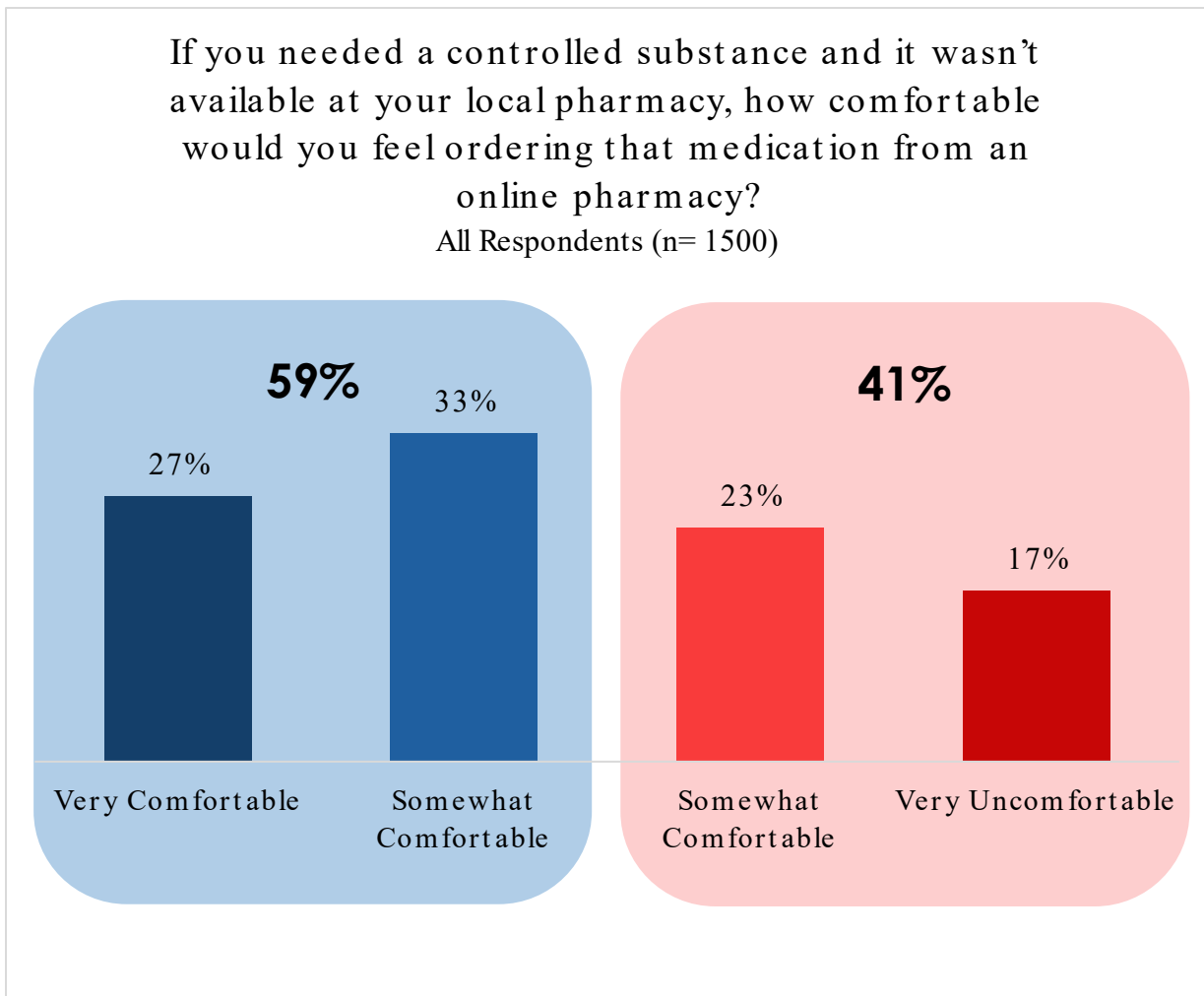
AMERICANS' REACTIONS TO CHANGING CONTROLLED SUBSTANCE REGULATIONS

In light of recent shortages of several controlled substances and the anticipated introduction of new Drug Enforcement Agency (DEA) regulations concerning telehealth prescribing of controlled substances,^{8, 9} survey respondents were asked several questions about their comfort receiving virtual services for controlled substance prescriptions as well as what restrictions, if any, should exist on healthcare providers operating virtually.

⁸ United States Food and Drug Administration (FDA). (2023, August 1). *FDA Announces Shortage of Adderall*. <https://www.fda.gov/drugs/drug-safety-and-availability/fda-announces-shortage-adderall>

⁹ United States Drug Enforcement Administration (DEA). (2023, October 6). *DEA and HHS Extend Telemedicine Flexibilities through 2024*. <https://www.dea.gov/documents/2023/2023-10/2023-10-06/dea-and-hhs-extend-telemedicine-flexibilities-through-2024>

- As expected, the vast majority of Americans support the continuation of the same flexibility allowed during the COVID-19 Public Health Emergency. However, approximately half of Americans support the introduction of some minimum requirements, such as establishing a provider-patient relationship first, and limitations to certain controlled substances.
 - 69% of Americans are comfortable being prescribed a controlled substance by a healthcare provider whom they meet exclusively through telehealth appointments.
 - 26% of Americans believe that a healthcare provider should be allowed to rely solely on telehealth appointments to prescribe any controlled substance (without any caveats). However, 34% of Americans support telehealth prescribing only after a patient-provider relationship has been established and 20% of Americans would support telehealth prescribing but not of all controlled substances.
 - Consistent with survey respondents' willingness to purchase their medications online when in shortage at their local pharmacy, the majority (59%) of Americans expressed comfort in ordering a controlled substance from an online pharmacy if unavailable at their local pharmacy.



ABOUT ASOP GLOBAL

The Alliance for Safe Online Pharmacies (ASOP Global), a 501(c)(4) nonprofit organization headquartered in Washington, D.C. with activities in the U.S., Canada, Europe, Latin America, and Asia, is dedicated to protecting consumers around the world, ensuring safe access to medications, and combating illegal online drug sellers.

SURVEY OBJECTIVE & METHODS

The ASOP Global Foundation conducted this survey to gain perspective into Americans' experience with and perceptions of online pharmacies. To allow for longitudinal analysis of trends, questions asked of respondents in similar surveys conducted in [2020](#) and [2021](#) were repeated in this survey.

Consistent with surveys conducted in [2020](#) and [2021](#), [Abacus Data](#) surveyed 1,500 American adults from September 7 to 10, 2023. A random sample of panelists was invited to complete the survey from a set of partner panels based on the Lucid exchange platform. These partners are typically double opt-in survey panels, blended to manage out potential skews in the data from a single source. The data was then weighted according to census data to ensure that the sample matched America's population. The margin of error for a comparable probability-based random sample of the same size is +/- 2.53%, 19 times out of 20.

Respondents were asked to answer questions based on the following definitions:

- **Prescription medication** – A medicine that can only be dispensed to those who have received a prescription from a licensed healthcare provider based on an in-person assessment, virtual assessment, or review of a patient questionnaire. This does NOT include medicines or supplements that can commonly be bought off-the-shelf in stores without prior consultation with a licensed healthcare provider.
- **Online pharmacy** – A website, app, or other electronic communication platform that sells prescription medications exclusively over the Internet and delivers them direct to consumers. Online pharmacies DO NOT include apps, websites, or other electronic communication platforms you may use to schedule the pickup or delivery of your prescription medications from a local brick-and-mortar pharmacy.
- **Controlled Substance** – Prescription medications that are classified as controlled substances by the Drug Enforcement Agency (DEA) because of their potential to cause physical and/or mental dependence that may lead to addiction. Common examples include medications for ADHD, opioid use disorder, or pain.
- **Telehealth Appointment** – A phone call or video visit with a licensed healthcare provider.

