

Comment to Government of Spain
Regarding Spain's Draft Royal Decree amending Draft Decree 579/2017
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Thank you for allowing us the opportunity to submit comments on the Draft Royal Decree. We represent the Consumer Center at the Taxpayers Protection Alliance (TPA). TPA is a non-profit, non-partisan organization based in the United States dedicated to educating the public through the research, analysis, and dissemination of information on the government's effects on the economy.

TPA's comments draw on academic research and regulations in jurisdictions outside of Spain. The Ficha Consulta publica document states that a main objective of the proposals is to reduce "exposure of the general population, and particularly young persons, to new forms of nicotine consumption." This exhibits a misunderstanding that noncombustible nicotine alternatives are economic substitutes for cigarettes. Rise in the use of nicotine alternatives leads to reduced use of the other more harmful alternatives. Therefore, restrictions on far less harmful nicotine products only serve to protect the cigarette trade from competition.

TPA believes that the Spanish government's intention to reduce the attractiveness of vaping and other lower risk nicotine alternatives is the wrong approach. The decree's proposals to prohibit "additives and flavoring components" will certainly make products less attractive. But, in doing so, it would remove a market advantage over combustible cigarettes which are the real public health problem in Spain.

TPA contends that, while the decree's efforts to prevent youth use of nicotine products are commendable, they could have profound negative consequences for the many more adults who use the products to improve their health and will deter people who currently smoke from quitting. It can also only degrade the Spanish public's understanding of the relative risks of the lower risk products compared with smoking and lead to fewer smokers quitting or, worse, drive nicotine consumers back to combustible cigarettes.

Key Points:

- Smoking prevalence in Spain is currently 33.1 percent¹, significantly higher than the European Union (EU) average of 19.7 percent.²
- Flavors play an important role in adult use of e-cigarettes in both transitioning adults away from smoking and helping adults remain smokefree.
- A 2020 study by Yale University found that adults who began vaping non-tobacco-flavored e-cigarettes were more likely to quit smoking than those who vaped tobacco flavors.

- One analysis of more than 70,000 adult e-cigarette users in the United States found the majority of adult vapers preferred fruit, dessert, sweets/candy flavors, while less than five percent preferred tobacco flavor.
- Banning flavored e-cigarettes alone would likely increase the choice of cigarettes, with several studies finding increased smoking rates and/or cigarette sales in localities which have restricted the sales of flavored e-cigarettes.
- Major international studies have found limited evidence that the use of e-cigarettes among youth leads to smoking. Instead, vaping competes against combustible cigarettes and is a gateway away from traditional tobacco smoking.
- Public health agencies from around the globe have found e-cigarettes to be a safer alternative to combustible cigarettes and effective at cessation.
- E-cigarettes are the most popular aid used by people to quit smoking, and vaping is positively associated with quitting smoking successfully.
- Nicotine pouches are a safer alternative to combustible tobacco and should be regulated in a manner which advances their potential to improve public health.
- Proposals which would effectively ban these products will only protect cigarette sales from competition.

The Role of Flavors for Smoking Cessation

There is an assumption that heavily restricting flavors in vaping products will protect public health in Spain. Nothing could be further from the truth. Restricting vaping products effectively protects sales of combustible cigarettes and insulates the tobacco industry against competition from safer nicotine consumption which is less harmful.

A vitally important aspect of vaping is that, in addition to having a fraction of the risk of smoking combustible tobacco, the act of vaping is more pleasing for adults. Flavors are essential to help transition adults away from smoking and help them remain smoke-free.

Flavors are appealing to adults in a wide variety of consumer goods, and it is no different with new reduced risk nicotine products. Importantly, flavors create a disassociation between smoking and vaping which is instrumental in preventing relapse for former smokers who found it difficult to quit by other means. While some vapers stick to a tobacco flavor, the vast majority do not. A wide choice of devices, nicotine strengths, and flavored liquids are integral to the success of vaping as an alternative to smoking because it enables individuals to tailor the vaping experience to suit their particular needs.

Flavors are also important in distinguishing combustible tobacco from vaping. There is no comparison between an attractive fruit flavor and the flavor of burned tobacco. Vaping is effectively a means of denormalizing tobacco and normalizing the use of a far safer alternative. A 2018 survey of nearly 70,000 American adult vapers “found flavors play a vital role in the use of electronic cigarettes and vaping devices.” In fact, 83.2 percent and 72.3 percent of survey

respondents reported vaping fruit and dessert flavors, respectively. Most respondents indicated restricting flavors would make vaping “less enjoyable.”³

Analysis of EcigIntelligence’s 2019 user survey found that fruits, sweets & candy, and desserts and bakery flavors “are among the most preferred flavors across all age groups.”⁴ Use of tobacco flavor was preferred by less than 5 percent of those who vape. If legal sales were restricted to tobacco flavor only, 69 percent of respondents said they would try to acquire their flavors from alternative methods and 25 percent stated that they would be willing to drive over 100 miles to obtain supply. This illustrates that flavors are important to the appeal of vaping over smoking and that proposals to ban flavored vaping products are more an attempt at prohibition by stealth than a serious public health measure.

A 2020 study found an association between flavors and smoking cessation. In a cohort study of more than 17,900 participants, the authors found that “adults who began vaping nontobacco-flavored e-cigarettes were more likely to quit smoking than those who vaped tobacco flavors.”⁵

Flavors Play Important Role in Adult E-Cigarette Use

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A variety of vape flavors are beneficial to public health for several reasons:

- They provide intense competition for the cigarette trade by presenting an attraction that combustible tobacco cannot match.
- Flavors provide a more appealing alternative to smoking and lead to population level reduced harm from nicotine use if uptake and initiation of vaping instead of smoking is widespread.
- Most people who smoke do so because of peer pressure, whether as adolescents or adults.
- Flavors help more people to enjoy vaping instead of smoking and therefore optimize the chance that future nicotine users will be more likely to initiate with a vape than with a combustible cigarette.

Banning all or most flavors would be like banning all or most flavors in ice cream. It would effectively prohibit all or most of the products, leaving only the unattractive base. This would severely obstruct the potential of vaping as an alternative to smoking for adult smokers, promote a black market and increase risks to young people if it encourages them to smoke or to access unregulated products sold by unscrupulous black-market sellers.

Restricting Vape Flavors Perpetuates Smoking

Many lawmakers are being convinced into proposing a ban on vape flavors in the mistaken belief that they are the only driver of youth vaping. It seems to have been forgotten that youth experimentation with much more harmful combustible tobacco was at very high levels in the past when there was only tobacco flavor to offer.

Studies have found that banning flavors in e-cigarettes leads to subsequent combustible cigarette use. A 2018 study published in *Tobacco Control* found that banning flavored “e-cigarettes alone would likely increase the choice of cigarettes in smokers.”⁸ A July 2021 survey in *Nicotine & Tobacco Research* found that one-third (33.2 percent) of survey respondents would “likely switch to [combustible] cigarettes” if flavors were banned in e-cigarettes.⁹

Flavor bans are some of the most restrictive policies in the United States’ e-cigarette regulations. Evidence from the United States indicates banning flavors has had little effect on reducing youth e-cigarette use and may lead to increased combustible cigarette rates, as evidenced in San Francisco, California.¹⁰

A 2021 Yale University study found that “San Francisco’s ban on flavored tobacco product sales was associated with increased smoking among minor high school students” and that “reducing access to flavored electronic nicotine delivery systems may motivate youths who would otherwise vape to substitute smoking.”¹¹

In 2023, researchers at the Yale School of Public Health examined the effects of statewide flavored e-cigarette bans on cigarette sales and found that for every 0.7 milliliter of e-liquid that was not sold due to the flavor restriction, 15 additional combustible cigarettes were sold. The researchers noted that “any public health benefits of reducing [e-cigarette] sales via flavor restrictions may offset public health costs from increased cigarette sales.”¹²

Vaping is Not a Gateway into Smoking

Major international studies have found no evidence that the use of e-cigarettes are leading non-smokers and the youth into cigarette smoking in countries such as the United States, the United Kingdom, and Australia.

A comprehensive evidence review by Public Health England in the UK found that “latest survey results in the UK do not support the idea that vaping (or the use of e-cigarettes) is a gateway to smoking” and that “[t]here is no evidence that [e-cigarettes] are undermining the long-term decline in cigarette smoking among adults and youth, and may in fact be contributing to it.”¹³

A time-series analysis conducted by University College London between 2007 and 2018 in the UK (published in 2022,) showed that the increase in the prevalence of e-cigarette use in England is not associated with an increase in the uptake of smoking among young adults aged 16 to 24.¹⁴

A 2021 study from the University of Queensland, Australia, concluded that “e-cigarette use has not been accompanied by increased cigarette smoking among young people in the United States, as would be the case if e-cigarette use were a major gateway to cigarette smoking.”¹⁵

An article in the American Journal of Public Health, authored by 15 former Presidents of the world-renowned Society for Research on Nicotine and Tobacco, found no evidence of a gateway effect, stating that “US survey data demonstrate that smoking among young people has declined at its fastest rate ever during vaping’s ascendancy. If vaping increases smoking initiation, other unknown factors more than compensate.”¹⁶ The Professors went on to warn of the damaging consequences of exaggerating the harms of youth vaping, declaring that “[w]ith the focus on youths creating an environment in which smokers believe that vaping is as dangerous as or more dangerous than smoking, many smokers struggling to quit may be unwilling to try vaping as an alternative. This likely translates into less smoking cessation than if smokers correctly understood the relative risks of vaping and smoking.”

More recently, research by the Rutgers Institute for Nicotine & Tobacco Studies, found that “[c]oncerns about a potential rise in adolescent cigarette use following the introduction of e-

cigarettes to the U.S. market in the early 2010s are not supported by the data.” It further observes that “the emergence of e-cigarettes has coincided with the most rapid declines in cigarette use over the past thirty years.”¹⁷

The most comprehensive investigation to date on the relationship between e-cigarettes and smoking by Queen Mary University in London revealed no evidence to support the idea that e-cigarettes promote smoking initiation among youth. Instead, it found that rather than being a gateway into smoking, vaping products compete against cigarettes and are a gateway away from traditional tobacco smoking.¹⁸

Positive Health Effects of Electronic Cigarettes and Vapor Products

E-cigarettes are significantly less harmful than combustible cigarettes. Numerous respected scientific institutions around the world have produced in-depth research to inform policymakers of the benefits of vaping products to adult smokers. The Spanish government should refer to these sources and build messages around them to better educate its citizens.

Public Health England (PHE): In 2015, a landmark report relying on 185 studies and produced by PHE (a leading health agency in the United Kingdom), found “that using [e-cigarettes are] around 95% safer than smoking,” and that their use “could help reducing smoking related disease, death and health inequalities.”¹⁹ In 2018, the agency reiterated their findings, finding vaping to be “at least 95% less harmful than smoking.”²⁰

As recent as February 2021, PHE provided the latest update to their ongoing report on the effects of vapor products in adults in the UK. The authors found that in the UK, e-cigarettes were the “most popular aid used by people to quit smoking [and] ... vaping is positively associated with quitting smoking successfully.”²¹

The Royal College of Physicians (RCP): In 2016, RCP found the use of e-cigarettes and vaping devices “unlikely to exceed 5% of the risk of harm from smoking tobacco.”²² RCP is another United Kingdom-based public health organization, and the same public group the United States relied on for its 1964 Surgeon General’s report on smoking and health.

The National Academies of Sciences, Engineering, and Medicine: In January 2018, the academy noted “using current generation e-cigarettes is less harmful than smoking.”²³

Cochrane Review: An October 2020 review in the *Cochrane Library Database of Systematic Reviews* analyzed 50 completed studies which had been published up until January 2020 and represented more than 12,400 participants.²⁴

The authors found that there was “moderate-certainty evidence, limited by imprecision, that quit rates were higher in people randomized to nicotine [e-cigarettes] than in those randomized to nicotine replacement therapy.” The authors found that e-cigarette use translated “to an additional

four successful quitters per 100.” The authors also found higher quit rates in participants that had used e-cigarettes containing nicotine, compared to the participants that had not used nicotine. Notably, the authors found that for “every 100 people using nicotine e-cigarettes to stop smoking, 10 might successfully stop, compared with only six of 100 people using nicotine replacement therapy or nicotine-free e-cigarettes.”²⁵

A January 2024 update to the 2020 review analyzed 88 studies of more than 27,000 adults who smoked, and compared e-cigarettes with nicotine replacement therapy, nicotine medications, and heated tobacco products.²⁶ The researchers found “high certainty” evidence that adults “are more likely to stop smoking for at least six months using nicotine e-cigarettes than using nicotine replacement therapy.”

Society for Research on Nicotine and Tobacco: An article in August 2021 co-authored by 15 past presidents of the SRNT reported that “Many scientists have concluded that vaping is likely substantially less dangerous than smoking.” Furthermore, they found that “A growing body of evidence indicates that vaping can foster smoking cessation” and warned “Studies have found that policies intended to restrict e-cigarette use may have unintentionally increased cigarette smoking.”²⁷

A 2017 study in *BMJ*’s peer-reviewed journal *Tobacco Control* examined health outcomes using “a strategy of switching cigarette smokers to e-cigarette use ... in the USA to accelerate tobacco control progress.”²⁸ The authors concluded that replacing e-cigarettes “for tobacco cigarettes would result in an estimated 6.6 million fewer deaths and more than 86 million fewer life-years lost.”

Nicotine Pouches Aid Smoking Cessation

The Spanish consultation has proposed curtailing the nicotine content of pouches at 0.99mg/pouch which is too low to be effective. This would represent an effective prohibition of the safest form of nicotine use while having no impact on the most harmful, the combustible cigarette.

By contrast, The British Standards Institution (BSI) has published a full specification (PAS) on the composition, manufacture and testing of oral nicotine pouches (PAS 8877:2022), which recommends a maximum nicotine content of 20 mg per pouch.²⁹

Similarly, German Federal Institute for Risk Assessment (BfR) assessed the health risks from nicotine pouches based on existing studies and data. The BfR has calculated that a 16.6 mg dose is estimated to be equivalent to the level in blood after smoking a cigarette.³⁰

The lower limit supported by the Spanish authorities actively protects cigarette sales by making nicotine pouches unviable as a far less harmful alternative. This considerably increases the risks of adverse consequences.

Nicotine pouches work in a similar way to pharmaceutical nicotine replacement therapies. They do not involve heating and contain the same form of nicotine as traditional patches and gums. Nicotine replacement therapies have been approved by both the UK MHRA and the US FDA for long term use as a replacement form of nicotine for those who currently smoke.

The UK National Health Service (NHS) gives guidance on the use of nicotine and states that “[n]icotine itself is not very harmful and has been used safely for many years in medicines to help people stop smoking.”³¹ The NHS also confirms that nicotine is not the cause of any smoking-related disease, by stating “cancer, lung disease, and diseases of the heart and circulation like heart attack and stroke ... are not caused by nicotine, which is relatively harmless to health.”

There is a need for proportionate regulation of nicotine pouches to ensure they are not accessed by children. It is also proportionate to mandate regulations which clearly state the amount of nicotine contained in each pouch so that the user can be confident in the product that they are purchasing.

However, the Spanish proposals are an effective prohibition and can only harm public health. The nicotine limit for these products should be set at the same level as those internationally recognized by the German BfR and the UK British Standards Institute.

Conclusion

Smoking prevalence in Spain is currently 33.1 percent³², significantly higher than the European Union (EU) average of 19.7 percent. Restrictions on vaping and other reduced risk nicotine products can only prolong smoking amongst the Spanish population by weakening the potential of highly effective smoking cessation options to reduce smoking-related disease and death.

The EU Beating Cancer Plan acknowledges tobacco harm reduction, and the role safer nicotine products can play in beating cancer. The Decree’s focus on making these products less attractive and attempting to reduce their appeal threatens to undermine the EU’s efforts to reduce cancer by obstructing smoking cessation in Spain.

The Spanish government should recognize the crucial role that vaping and other reduced risk nicotine products can play in reducing combustible tobacco use. Rather than making them less attractive to consumers, the government should put forth policies that inform consumers of the wide variety of less harmful products on the market, while enforcing controls on sales to adolescents.

- ¹ Observatorio Español de las Drogas y las Adicciones. Informe 2023. Alcohol, tabaco y drogas ilegales en España. Madrid: Ministerio de Sanidad. Delegación del Gobierno para el Plan Nacional sobre Drogas; 2023.
https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/pdf/2022_Informe_EDADES.pdf
- ² EuroNews: Smoking in Europe: Which countries are the most and least addicted to tobacco and vaping? 14 August 2023.
- ³ Submitting to the FDA the findings of the largest ever survey on e-cigarette flavors use by US vapers, Dr Konstantinos Farsalinos, August 2018, <http://www.ecigarette-research.org/research/index.php/whats-new/2018-2/266-us-flav>
- ⁴ Ecigintelligence user survey 2019, <https://casaa.org/ecigintelligence-user-survey-2019/>
- ⁵ Friedman AS, Xu S. Associations of Flavored e-Cigarette Uptake With Subsequent Smoking Initiation and Cessation. *JAMA Netw Open*. 2020 Jun 1;3(6):e203826. doi: 10.1001/jamanetworkopen.2020.3826. PMID: 32501490; PMCID: PMC7275248. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2766787>
- ⁶ Konstantinos Farsalinos, "Submitting to the FDA the findings of the largest ever survey on e-cigarette flavors use by US vapers," *E-Cigarette Research*, August 11, 2008, <http://www.ecigarette-research.org/research/index.php/whats-new/2018-2/266-us-flav>.
- ⁷ Abigail S. Friedman and SiQing Xu, "Associations of Flavored e-Cigarette Uptake With Subsequent Smoking Initiation and Cessation," *JAMA*, June 5, 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7275248/>.
- ⁸ John Bukell, Joachim Marti, and Jody L. Sindelar, "Should flavours be banned in e-cigarettes? Evidence on adult smokers and recent quitters from a discrete choice experiment," *Tobacco Control*, May 28, 2018, <https://tobaccocontrol.bmj.com/content/tobaccocontrol/28/2/168.full.pdf>.
- ⁹ Heather Posner et al., "Reactions to sales restrictions on flavored vape products or all vape products among young adults in the US," *Nicotine & Tobacco Research*, July 31, 2021, <https://academic.oup.com/ntr/advance-article-abstract/doi/10.1093/ntr/ntab154/6332852?redirectedFrom=fulltext>.
- ¹⁰ Lindsey Stroud, "Vaping Up, Smoking Increasing Among Teens in San Francisco – Despite Bans," *Tobacco Harm Reduction* 101, July 28, 2020, <https://www.thr101.org/research/2020/vaping-up-smoking-increasing-among-teens-in-san-francisco-despite-bans>.
- ¹¹ Abigail Friedman, "A Difference-in-Differences Analysis of Youth Smoking and a Ban on Sales of Flavored Tobacco Products in San Francisco, California," *JAMA Pediatrics*, May 24, 2021, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8145156/>.
- ¹² Abigail Friedman et al., "E-cigarette Flavor Restrictions' Effects on Tobacco Product Sales," *Social Science Research Network (SSRN)*, October 31, 2023, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4586701.
- ¹³ Public Health England: E-cigarettes: an evidence update, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/733022/Ecigarettes_an_evidence_update_A_report_commissioned_by_Public_Health_England_FINAL.pdf
- ¹⁴ UCL: E-cigarettes not a substantial gateway to smoking for young people, <https://www.ucl.ac.uk/news/2022/mar/e-cigarettes-not-substantial-gateway-smoking-young-people>
- ¹⁵ Hall W, Chan G (2021) The "gateway" effect of e-cigarettes may be explained by a genetic liability to risk-taking. *PLoS Med* 18(3): e1003554. <https://doi.org/10.1371/journal.pmed.1003554>
- ¹⁶ David J. K. Balfour, et al. "Balancing Consideration of the Risks and Benefits of E-Cigarettes", *American Journal of Public Health* 111, no. 9 (September 1, 2021): pp. 1661-1672. <https://doi.org/10.2105/AJPH.2021.306416>
- ¹⁷ Delnevo CD, Villanti AC. [Dramatic Reductions in Cigarette Smoking Prevalence among High School Youth from 1991 to 2022 Unlikely to Have Been Undermined by E-Cigarettes](#). *International Journal of Environmental Research and Public Health*. 30 September, 2023
- ¹⁸ Pesola F, Phillips-Waller A, Beard E, Shahab L, Sweanor D, Jarvis M & Hajek P. [Effects of reduced-risk nicotine-delivery products on smoking prevalence and cigarette sales: an observational study](#). *Public Health Res* September, 2023

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- ¹⁹ A. McNeill *et al.*, “E-cigarettes: an evidence update,” Public Health England, August, 2015, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684963/Evidence_review_of_e-cigarettes_and_heated_tobacco_products_2018.pdf.
- ²⁰ A. McNeill *et al.*, “Evidence review of e-cigarettes and heated tobacco products 2018,” Public Health England, February 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684963/Evidence_review_of_e-cigarettes_and_heated_tobacco_products_2018.pdf.
- ²¹ A. McNeill *et al.*, “Vaping in England: an evidence update including vaping for smoking cessation, February 2021,” Public Health England, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962221/Vaping_in_England_evidence_update_February_2021.pdf.
- ²² Royal College of Physicians, *Nicotine without Smoke: Tobacco Harm Reduction*, April, 2016, <https://www.rcplondon.ac.uk/projects/outputs/nicotine-without-smoke-tobacco-harm-reduction-0>.
- ²³ Committee on the Review of the Health Effects of Electronic Nicotine Delivery Systems, “Public Health Consequences of E-Cigarettes,” The National Academies of Science, Engineering, and Medicine, 2018, <https://www.nap.edu/catalog/24952/public-health-consequences-of-e-cigarettes>.
- ²⁴ Jamie Hartmann-Boyce *et al.*, “Electronic cigarettes for smoking cessation,” *Cochrane Database of Systematic Reviews*, October 14, 2020, <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD010216.pub4/full>.
- ²⁵ *Ibid.*
- ²⁶ Nicola Lindson *et al.*, “Electronic cigarettes for smoking cessation,” *Cochrane Database of Systematic Reviews*, January 8, 2024, <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD010216.pub8/full>.
- ²⁷ David J. K. Balfour, *et al.*, “Balancing Consideration of the Risks and Benefits of E-Cigarettes,” *American Journal of Public Health* 111, no. 9 (September 1, 2021): pp. 1661-1672. <https://ajph.aphapublications.org/doi/10.2105/AJPH.2021.306416>
- ²⁸ David T. Levy *et al.*, “Potential deaths averted in USA by replacing cigarettes with e-cigarettes,” *Tobacco Control*, October 2, 2017, <http://tobaccocontrol.bmj.com/content/early/2017/08/30/tobaccocontrol-2017-053759.info>.
- ²⁹ PAS 8877:2022 Tobacco-free oral nicotine pouches. Composition, manufacture and testing. Specification
- ³⁰ Federal Institute for Risk Assessment. October 2022. Health assessment of nicotine pouches. 28 Feb 2022. <https://knowledge.bsigroup.com/products/tobacco-free-oral-nicotine-pouches-composition-manufacture-and-testing-specification?version=standard> <https://www.bfr.bund.de/cm/343/gesundheitsliche-bewertung-von-nikotinbeutel-nikotinpouches.pdf>
- ³¹ NHS Better Health <https://www.nhs.uk/better-health/quit-smoking/ready-to-quit-smoking/vaping-to-quit-smoking/>
- ³² Observatorio Español de las Drogas y las Adicciones. Informe 2023. Alcohol, tabaco y drogas ilegales en España. Madrid: Ministerio de Sanidad. Delegación del Gobierno para el Plan Nacional sobre Drogas; 2023. https://pnsd.sanidad.gob.es/profesionales/sistemasInformacion/sistemaInformacion/pdf/2022_Informe_EDADES.pdf