World Health Organization

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Lessons from the Baltic Alcohol Control Policy Project

Policies that contribute to decreasing burden of mortality and disease

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Abstract

This short brief describes the main findings and the key lessons learned from the research project "Evaluation of the impact of alcohol control policies on morbidity and mortality in Lithuania and other Baltic states", funded by the United States National Institute on Alcohol Abuse and Alcoholism for the period 2000–2025. The WHO-backed project aims to assess the effects of alcohol control policies implemented in Estonia, Latvia and Lithuania and to investigate the impact they have had on both people's health and the countries' economies, based on concrete actions taken. The key findings of the project demonstrate that alcohol control policies such as taxation and availability measures decrease all-cause mortality and reduce inequalities, and that dismantling alcohol control policies has the opposite effect on population health. They also highlight that consumption of unrecorded alcohol will not necessarily go up if taxation is increased and that specific countermeasures can be taken to prevent an increase in unrecorded consumption.

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THE BALTIC ALCOHOL CONTROL POLICY PROJECT

Launched in July 2020, the WHO-backed research project "Evaluation of the impact of alcohol control policies on morbidity and mortality in Lithuania and other Baltic states" (the Project) aims to assess the effects of alcohol control policies implemented in the three Baltic states and to investigate the impact they have had on both people's health and the countries' economies, based on concrete actions taken in Estonia, Latvia and Lithuania over the past few decades. The Project aims to equip national experts and decision-makers with the necessary knowledge and skills for gathering valuable data and statistics, identifying and evaluating best practices and assessing the cost–effectiveness of alcohol control policies. The Project is funded by the United States National Institute on Alcohol Abuse and Alcoholism (NIAAA).

LESSON 1. THE POSITIVE EFFECTS OF HIGH IMPACT ALCOHOL CONTROL POLICIES

Major alcohol control policies such as taxation and availability measures decrease all-cause mortality and increase life expectancy.

Alcohol control policies have two major functions. They act firstly as a means to establish the treatment of alcohol as a non-ordinary commodity that causes major health and social harm to both those consuming alcohol, and the people around them *(1)*. Efforts to denormalize alcoholic beverages as economic goods can be achieved by marketing bans, warning labels which convey knowledge about the consequences of alcohol use and educational campaigns. Secondly and more importantly, these policies can be employed to immediately reduce harm; in regions such as the European Union (EU) where consumption levels are the highest worldwide, alcohol control policies such as taxation increases and availability reductions have specifically and effectively done so *(2)*.

The Project has not only provided a detailed classification of alcohol control policies and their expected effects *(3,4)* but also has empirically tested these effects in the Baltics with the following key results.

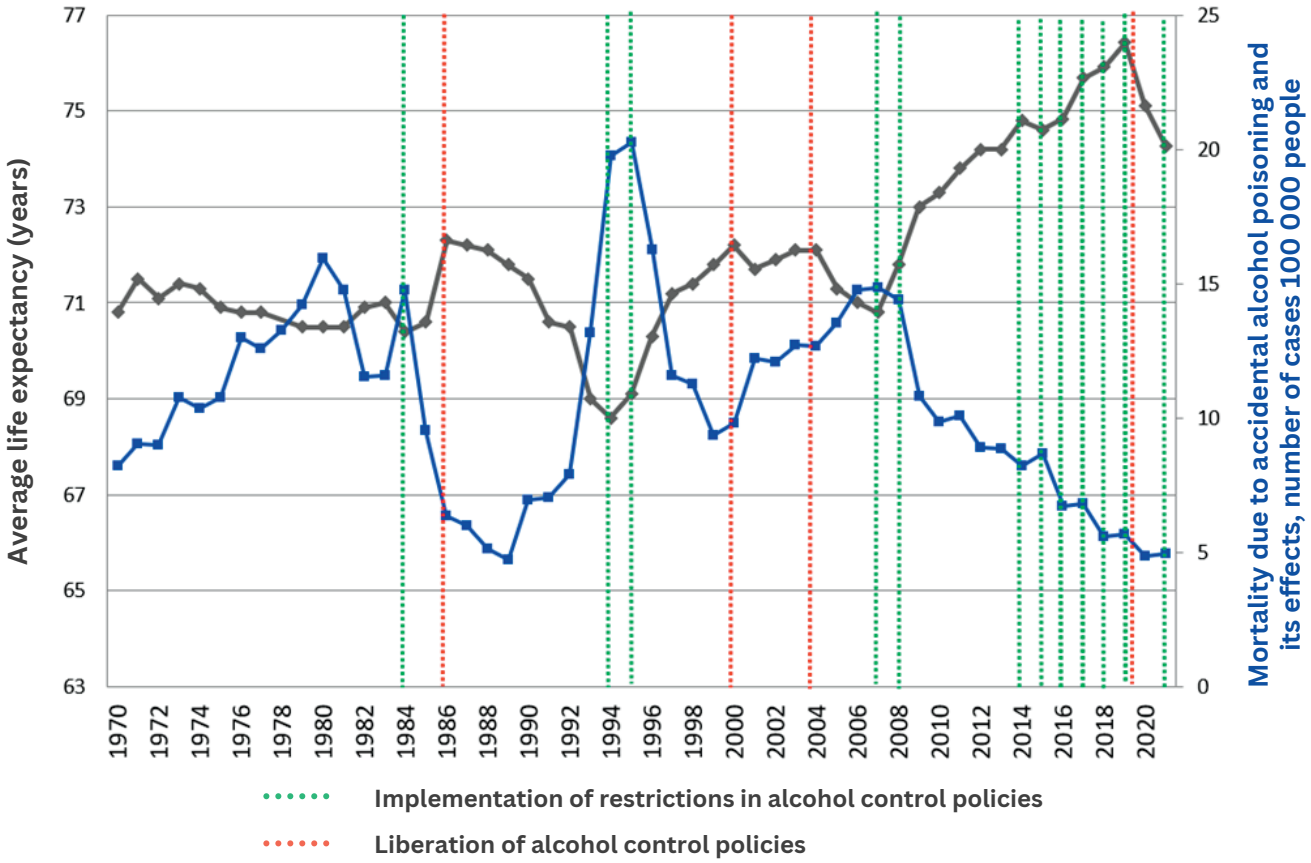
- Each of the key taxation increases and reductions in trading hours resulted in an average decrease of 0.9 litres (L) of pure alcohol per capita within the year the policy was implemented, with no significant differences between countries *(5)*.
- Each of the key taxation increases and reductions in trading hours resulted in an average reduction of age-standardized all-cause mortality rates: 2.3% per year among men and a lesser reduction of 1.1% per year among women *(6)*.

The Project has measured the effects of alcohol control policies by studying 18 similar policies in the three Baltic countries and Poland over 20 years, using countries where policies were not enacted as a control. This design allows causal inferences to help to verify that effects were indeed from the policies themselves and not from other coincidental factors.

Analyses of single-disease categories that are partially attributable to alcohol, such as liver cirrhosis *(7)*, stroke *(8)*, traffic injury *(9)* and suicide *(10)* have generally corroborated the above findings.

Life expectancy is another measure of policy effectiveness, derived from all-cause mortality. The impact of alcohol control policies on life expectancy in Lithuania can be seen in Fig. 1.

Fig. 1. Association between alcohol control policy measures and life expectancy at birth in Lithuania, 1984–2021



Note: the last red vertical line in the graph represents effects of the 2020 COVID-19 pandemic. Chart data are part of continuously evolving collaborative data from conference presentations collated from information provided by WHO, the Lithuanian Institute of Hygiene, other contributors and lecturers, and analysis by the researchers from Health Research Institute.

LESSON 2. ALCOHOL CONTROL POLICIES CAN REDUCE INEQUALITIES IN ALL-CAUSE MORTALITY

This has been exemplified in Lithuania, where mortality inequalities have exhibited a positive trend, with alcohol control policies contributing to this development.

WHO has defined equity as the absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other dimensions *(11)*. Health equity is achieved when everyone can attain their full potential for health and well-being, and is one of the fundamental aims underlying the Sustainable Development Goals. Addressing health inequalities, such as differences in health across population subgroups, is a crucial part of addressing health inequities, defined as differences in health that are deemed unfair or ethically problematic *(12)*.

Mortality inequalities have been one of the main indicators of health inequality (12), and addressing the persistent and considerable differences in mortality and other health indicators within the EU and its Member States can be viewed as one of the most important challenges in public health in this region *(13)*.

Contrary to many other EU countries, mortality inequalities in Lithuania have exhibited a positive trend, with alcohol control policies contributing to this development. This is most aptly demonstrated by the fact that the largest effect of alcohol control policies on mortality inequalities in a country to date was observed in Lithuania, based on the above-mentioned increase of alcohol excise taxation in 2017 *(14)*. Overall, between 2012 and 2019 and during a period of implementation of extensive alcohol control policies, education-based inequalities in all-cause mortality in Lithuania decreased by 18% among men and by 14% among women. The alcohol taxation increase of 2017 exemplified this outcome, with a pronounced reduction in relative mortality inequalities among Lithuanian men, albeit a temporary trend. Subsequent decomposition analyses have suggested that the reduction in mortality inequalities between lower- and higher-educated men was primarily driven by the narrowing mortality differences between socioeconomic strata in injuries and infectious diseases *(14)*, two cause-of-death categories which are causally linked to alcohol consumption *(15)*.

The findings from Lithuania significantly contribute to the limited but increasing evidence that financial policies such as taxation increases or minimum unit pricing can reduce mortality inequalities *(16–18)*. The Project is currently working on similar analyses for Estonia.

LESSON 3. ISSUES WITH UNRECORDED ALCOHOL USAGE AND CROSS-BORDER TRADE

While unrecorded alcohol usage does not necessarily increase with taxation increases, this is an observed trend due to cross-border trade increasing in response to such increases. Coordinated alcohol control policies between neighbouring countries are needed to avoid a race towards lower taxation because of concerns that cross-border trade might increase.

One goal of the Project was to review the relationship between alcohol taxation and unrecorded alcohol consumption, while also conducting a detailed case study on the level of unrecorded consumption in Lithuania. Using data from the Lithuanian implementation of the European Health Interview Survey of 2019 *(19)*, it was estimated that unrecorded alcohol consumption in Lithuania accounted for 8.3% of overall use, or around 1 L of pure alcohol per capita consumption, while the recorded consumption was 11.2 L. Using methodology suggested by Norström *(20)*, the study modelled how levels of unrecorded consumption over the prior two decades were changing according to the observance of fully alcohol-attributable mortality outcomes such as alcoholic liver disease and alcohol poisoning. These results indicated that levels of unrecorded consumption were relatively low, with no marked fluctuations *(21)*. Estimates from a pan-European survey conducted in 2021 corroborated stable unrecorded alcohol consumption in Lithuania at slightly below the European average *(22)*.

While levels of unrecorded consumption, including cross-border trading, remained relatively stable in Lithuania *(21)*, there were much larger fluctuations in cross-border trading in Estonia and Latvia. Therefore, from 2015 the decrease in adult per capita consumption in Estonia was less pronounced than suggested, because of the compensating effect of an increase in the amount of alcohol bought abroad, mainly in Latvia. Cross-border trade in alcohol between Estonia and Latvia increased 300% from 2016 to 2017, as Estonia maintained much higher retail prices (at least 30% more for strong alcohol and 50% more for beer) than neighbouring Latvia, where stores and warehouses with cheaper alcohol prices were established directly along the border *(23)*.

This situation resembled the cross-border alcohol trade between Estonia and Finland in 2004 after Estonia joined the EU, when prices in Estonia were much lower compared with Finland *(24)*. In reaction to the influx of cheap alcohol from their southern neighbours via cross-border shopping, the Estonian Government adopted a bill of amendments, cancelling the alcohol excise duty increases planned for 2019 and 2020. Instead, it was decided to cut excise tax rates on both light alcohol and spirits by 25% from July 2019, to halt and reverse cross-border alcohol trade in Latvia. Latvia responded with a temporary 15% cut in the price of spirits between August 2019 and February 2020 *(23,25)*. As a consequence, after years of decline, the adult per capita consumption in Estonia started to increase *(5)*. The situation eventually became calmer, in part because of the COVID-19 pandemic and resulting travel restrictions.

The overall lesson from the situation in the Baltics and surrounding countries was that while taxation increases do not necessarily cause an increase in unrecorded consumption *(26)*, they can cause such an increase if there is a sufficiently large gap in retail prices

between a domestic and an easy-to-reach foreign market, if a high level of unrecorded consumption existed prior to the increases and/or no countermeasures were in place. In the case of small countries such as those in the Baltics, cross-border shopping may become attractive if the price difference is high enough. Instead of competing downwards and facilitating the detrimental consequences for public health associated with increases in consumption, cross-country agreements that aim to establish commonly agreed-upon higher price levels are a preferable solution for revenue and for protecting health in the future.

LESSON 4. DISMANTLING CONTROL POLICIES AND INACTIVITY INCREASES BURDEN OF DISEASE

Dismantling alcohol control policies and inactivity will increase the burden of disease if other policies are not enacted to counter these effects

Comparative analyses of Poland and the Baltic countries also demonstrated the consequences of dismantling major alcohol control policies without enacting other policies. Based on the Act on Upbringing in Sobriety and Counteracting Alcoholism (1982) *(27)*, in the 1980s Poland established a strict and rigorous system of alcohol control policies, regulating availability and marketing, in addition to improving a specialized treatment system for alcohol use disorders. This Act has, however, been modified multiple times, often by dismantling key provisions and liberalizing stipulations about industry interference or availability (see Table 1).

By the mid-1980s, Poland's process of dismantling the provisions of the 1982 Act and creating legal loopholes was underway, and continued for at least two decades. By the beginning of the 21st century, the fundamentals of the Act had been practically abandoned. In 2002 excise tax on spirits was reduced by 30%, and in 2001 beer restrictions were relaxed and advertising returned to television *(28)*. In 2010 the alcohol industry launched an ongoing marketing campaign (unregulated by the state) which led to a significant increase in sales of small bottles of vodka – about 1.1 billion bottles a year *(29)*. These movements were further compounded by the inaction of the Government from 2000–2020 towards implementing new measures reducing affordability or availability, banning or restricting the marketing of alcohol. This resulted in clear discrepancies.

- A continual increase of alcohol consumption over the period has been observed, in comparison with decreases in Estonia and Lithuania from 2008. These two countries have introduced several major alcohol control policies in this period *(5)*.
- Marked increases in alcohol-attributable mortality have also been observed, particularly alcoholic liver cirrhosis, among both men and women of all ages and in all educational groups *(30–33)*.

In sum, inaction in key alcohol policy areas has noticeable consequences; in the case of Poland, increased mortality and burden of disease.

Major alcohol policies are defined by taxation increases reducing affordability and trading hour reductions by at least 20% and at least partial bans on marketing; or liberalizations thereof. For details of the classification, see Rehm et al., 2023 *(3)*, Rehm et al., 2021 *(4)*, and Table 1, which uses colour coding to indicate classification types.

Table 1. Overview of major alcohol control policies affecting price, availability and advertising in the Baltic countries and Poland 2000–2020

Year/ Country	Estonia	Latvia	Lithuania	Poland
2000				
2001				**June 28:** exemption for beer was introduced into the ban on advertisement
2002		**June 14** ban on off-premise sales of alcoholic beverages between 10 p.m. and 8 a.m.		**October 1:** reduction in excise taxation by 30%
2003				**May 25:** return of beer advertising on billboards; reduction of the ban on advertising on TV, radio and theatres to 06:00 to 20:00
2004	EU membership achieved as of **1 May**			
2005				
2006				
2007	Schengen Area regulations were applied from **21 December 2007** onwards in Estonia, Latvia, Lithuania and Poland			

Table 1 cont'd.

Year/ Country	Estonia	Latvia	Lithuania	Poland
2008	**January 1 / July 1:** excise tax increases followed by lower affordability **July 14:** off-premise sales nationwide prohibited between 22:00 and 10:00 **November 1:** alcohol Advertising Act – broadcast advertising prohibited between 07:00 and 21:00		**January 1:** excise tax increases followed by lower affordability and other measures **January 1:** year of sobriety (marketing/ advertising banned on TV/radio during daytime)	
2009		**February 1 /July 1:** excise tax increases followed by lower affordability	**January 1:** ban on off-premise sales of alcoholic beverages between 22:00 and 08:00	**March 1:** excise tax increases followed by lower affordability
2010	**January 1:** excise tax increases followed by lower affordability	**February 1:** excise tax increases followed by lower affordability		
2011				
2012				
2013		**July 19:** outdoor advertising of all alcohol beverages prohibited		
2014				

Table 1 cont'd.

Year/ Country	Estonia	Latvia	Lithuania	Poland
2015				
2016	**February 1:** excise tax increases followed by lower affordability			
2017	**February 1 and July 1:** excise tax increases followed by lower affordability		**March 1:** excise tax increases followed by lower affordability	
2018	**February 1:** excise tax increases followed by lower affordability		**January 1:** retail hours for off-premise sales further reduced to 10:00 until 20:00 from Monday to Saturday and 10:00 to 15:00 on Sunday	
	June 1: alcohol Advertising Act: alcohol advertising in broadcasting prohibited between 07:00 and 22:00 (1 hour longer)		**January 1:** full ban of TV, radio, and internet advertisements	
2019	**July 1:** reduction in excise taxation by 25%	**March 1:** excise tax increases followed by lower affordability		
2020				**January 1: e**xcise tax increases followed by lower affordability

Note: Dates of the implementation are indicated in bold. Green shading refers to taxation increases, blue to availability restrictions, grey indicates advertising/marketing policies and red shading indicates relaxation of "best buy" policies.

OTHER FINDINGS OF NOTE

- An increase of the minimum legal drinking and purchasing age from 18 to 20 in Lithuania resulted in minimal mortality gains *(34)*, even taking into account problems with enforcement, a common issue experienced by other countries when implementing similar policies *(35)*. However; research in other countries suggests that the true benefits of this policy may not be observable for several more years *(36–38)*.
- The ban on marketing and advertisement in Lithuania seems to be working well overall *(39)*. However, it is hard to evaluate the immediate effects of measures which are trying to change an entire culture in the long term.

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