To Your Health (Terviseks): Alcohol and Drug Policy as a Health Promotion Strategy for Estonia

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What are the public health priorities for Estonia?

The main objectives for the National Health Plan (NHP) 2020–2030 are:

- Increase life expectancy to 78 years for men and 84 years for women.
- Reduce health inequalities (between genders, regions and levels of education)
- Expand the revenue base of the health system
- Better manage noncommunicable diseases
- Reap the benefits of the e-health system, especially for care integration

Habicht, et al. (2022). Estonia: Health system summary, 2022 World Health Organization 2023

Why are treatment services for addiction important for public health in Estonia?

- Alcohol, smoking and drug abuse, along with gambling addiction, are prevalent in Estonia, and they often co-occur in the same individuals.
- Alcohol-related mortality is one of the highest in Europe, which may explain the relatively low life expectancy among males.
- Injection drug use, HIV infection and overdose mortality are among the highest in the EU countries (Uuskula et al. 2020).
- Effective management of alcohol and drug use disorders could have a significant impact on premature mortality, in addition to the beneficial effects treatment services have on individuals, families and communities.

The treatment coverage dilemma

- A very low proportion of people who can benefit from addiction treatment have access to it.
- Estimates suggest only about 20% of people with Alcohol Use Disorders receive treatment (Carvalho, et al., 2019),
- Only one in six people with Drug Use Disorders have access to treatment (UN Office on Drugs and Crime, 2018)
- Treatment for alcohol, drug and gambling disorders is highly stigmatized

Can improved addiction services help Estonia reach its public health objectives?

This will depend on three things:

1) The *impact* of evidence-based treatment services, especially at the population level (e.g., improved life expectancy, lower addiction-related mortality, fewer social problems, lower health care costs).
2) *Integration* of addiction services with primary health care, hospital care, criminal justice and mental health services.
3) The use of complementary drug, alcohol and gambling policies for harm reduction, supply control and demand reduction.

Are specialized addiction services effective?

Scientific Evidence

What is the research base in support of a public health approach?

Early intervention and referral to treatment for alcohol problems

Intervention	Effectivenesss	Breadth of research support	Comments
Brief interventions designed for non-dependent high-risk drinkers	++	+++	Can be effective, but most primary ca time (and often motivation) to condu Moderate cost to implement and sus reach
Medical and social detoxification for persons with alcohol dependence	++	++	Safe and effective (can be lifesaving) but has little effect on long-term alco with other therapies; high cost to imp
Behavioural and psychosocial modalities	+/++	+++	Effective in reducing alcohol consum typical for a significant proportion of Standardization of therapeutic techn difficult in community settings where

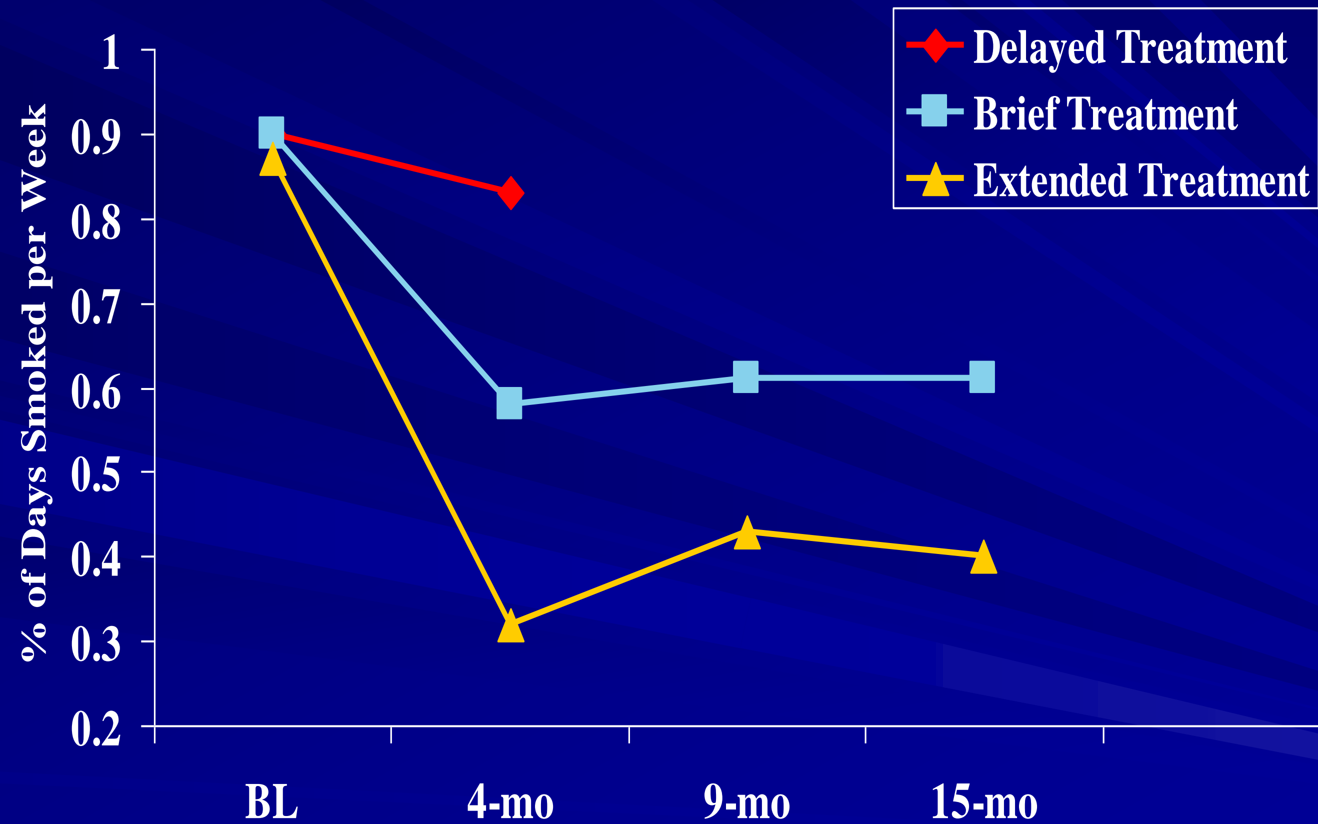
Treatment for alcohol dependence

Strategy or intervention	Effectiveness	Breadth of support	Comments
Contingency management	++	++	Highly effective in promoting treatment attendance and reducing relapse to alcohol use.
Pharmacological treatment	+/++	++	Effective in reducing alcohol consumption and harms, but relapse is typical for a significant proportion of the treated population. The additive effects of pharmacotherapies, when combined with psychosocial therapies, have been marginal
Mandatory and coercive treatment	+/?	++	Much of the treatment of alcohol dependence has an element of coercion in it, but this rating refers to studies of highly coercive programmes; cost to implement and sustain is likely to be high

Treatment and Harm Minimization for Drug Use disorders

- Opioid Substitution Treatment services for opiate dependent individuals have the strongest supporting evidence
- They are also effective ways to reduce drug-related crime and the spread of HIV infection.
- Some harm reduction programs, such as needle exchange programs, reduce high risk injection practices and engage IDUs in treatment and health services.

Cognitive-behavioral Therapy and Motivational Enhancement Therapy for Chronic Cannabis Users

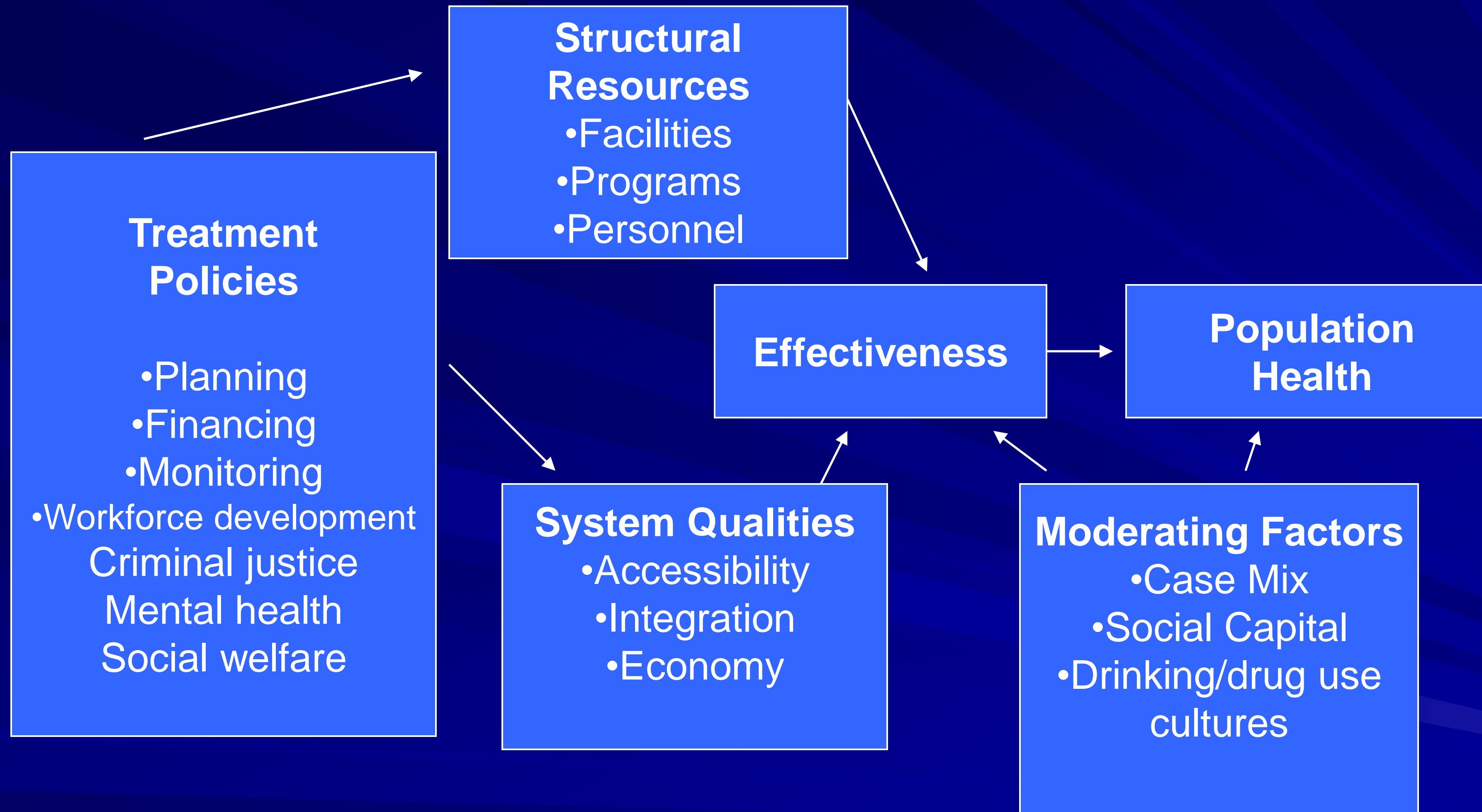


FROM TREATMENT EFFECTIVENESS TO POPULATION EFFECTS

- ***Research on efficacy and effectiveness suggests***:
  - Treatment and early intervention can: a) improve psychiatric, medical and employment outcomes, b) reduce alcohol and drug use

Can the additive effects of early intervention, treatment services and recovery support reduce population rates of addiction problems?

Conceptual Model of Addiction Treatment Services



Policies → System Characteristics → Effectiveness → Population Impact

Research on Population Impact of Addiction Treatment Services

- Increases in the proportion of alcoholics in treatment linked to decreases in liver cirrhosis morbidity (Mann et al 1992).
- Increases in AA membership and amount of treatment linked to decreased alcohol problems (Smart and Mann 2003;)
- Increases in treatment linked to declines in cirrhosis mortality (Holder and Parker, 1992)
- Growth in availability of Opioid Maintenance Treatment is associated with reductions in illicit opiate use, crime and HIV risk behaviors in UK, France, Norway, USA (Bukten et al. 2011; Marsch, 1998)

Modeling studies

- Using data from the 27 nations of the EU, Rehm et al. (2013) modeled the impact of alcohol dependence on mortality burden.
- Based on treatment effectiveness data, increasing treatment coverage to 40% of people with alcohol dependence (from the current level of 10%), alcohol-attributable mortality could be reduced by 13% in men and 9% for women.
- Brennan et al. (2019) estimated the impact of increasing access to specialist treatment to reduce future prevalence of alcohol dependence by 19.2%.

Do treatment and early intervention have an impact at the population level?

- Brief interventions for nondependent high-risk drinkers, behavioral and psychosocial therapies, pharmacological treatment, mutual help interventions and some types of coercive treatment all have good evidence of effectiveness
- Because of low treatment coverage in most countries, and high cost of services, treatment alone is unlikely to impact aggregate indicators of harm
- Treatment services can contribute to the mix of strategies needed to reduce alcohol problems, but they do not obviate the need for *universal strategies* that affect the availability, affordability and attractiveness of addictive substances .

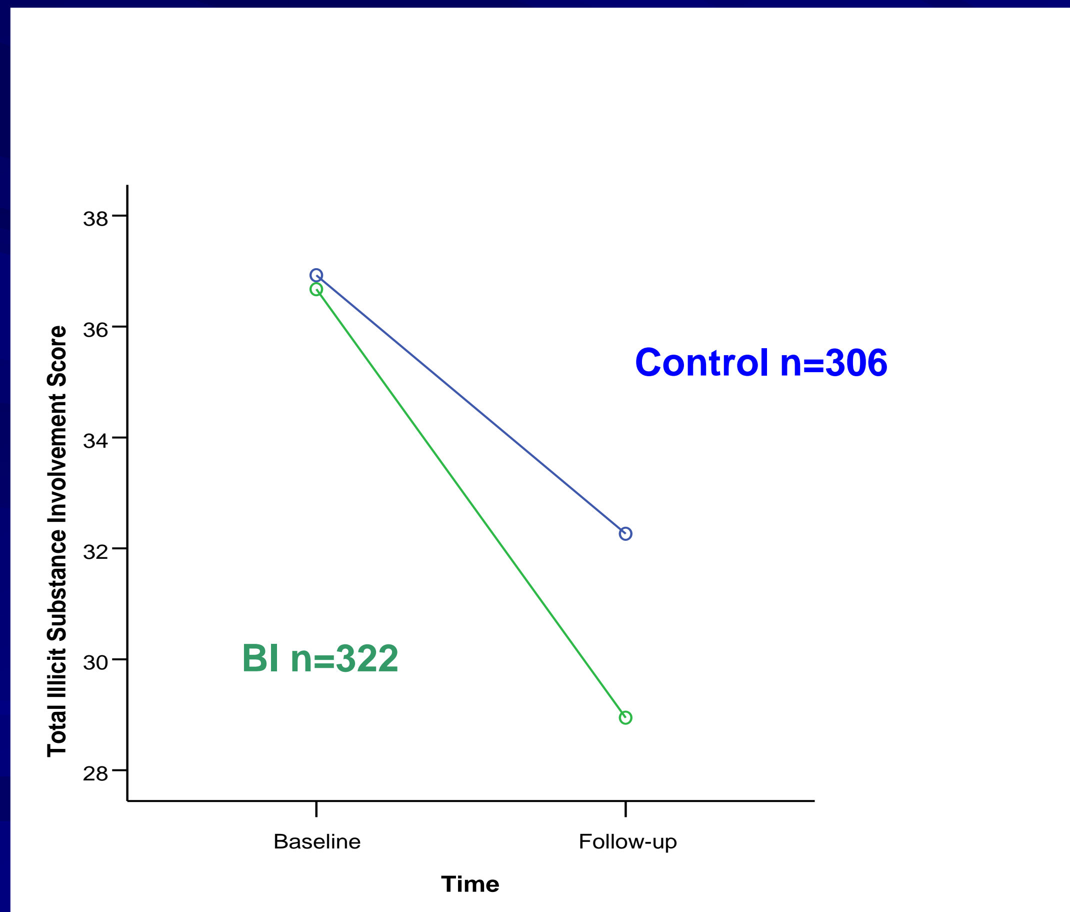
How can treatment services be strengthened to have a population impact?

- Universal screening and brief intervention in health care and social services
- Use e-health technology to improve access
- Improve efficiency, economy, effectiveness, equity, continuity of care
- Marketing bans to prevent relapse among people in recovery
- Enforcement of drink- driving laws to increase treatment-seeking
- Dedicated alcohol taxes to fund treatment and prevention services
- Advocate for upstream policies to complement treatment services

Addiction services integration

- Addiction services integration (alcohol, tobacco, gaming, eating, illegal substances) could improve treatment outcomes by removing the silos between health, mental health and social sectors in dealing with additions.
- Many people have multiple addictions and multiple problems that require management at the same time.

Total Illicit Substance Involvement Control vs. Brief Intervention



WHO study in India, Australia, USA, Thailand

Total substance involvement score on WHO ASSIST significantly lower at follow-up compared with the Control group

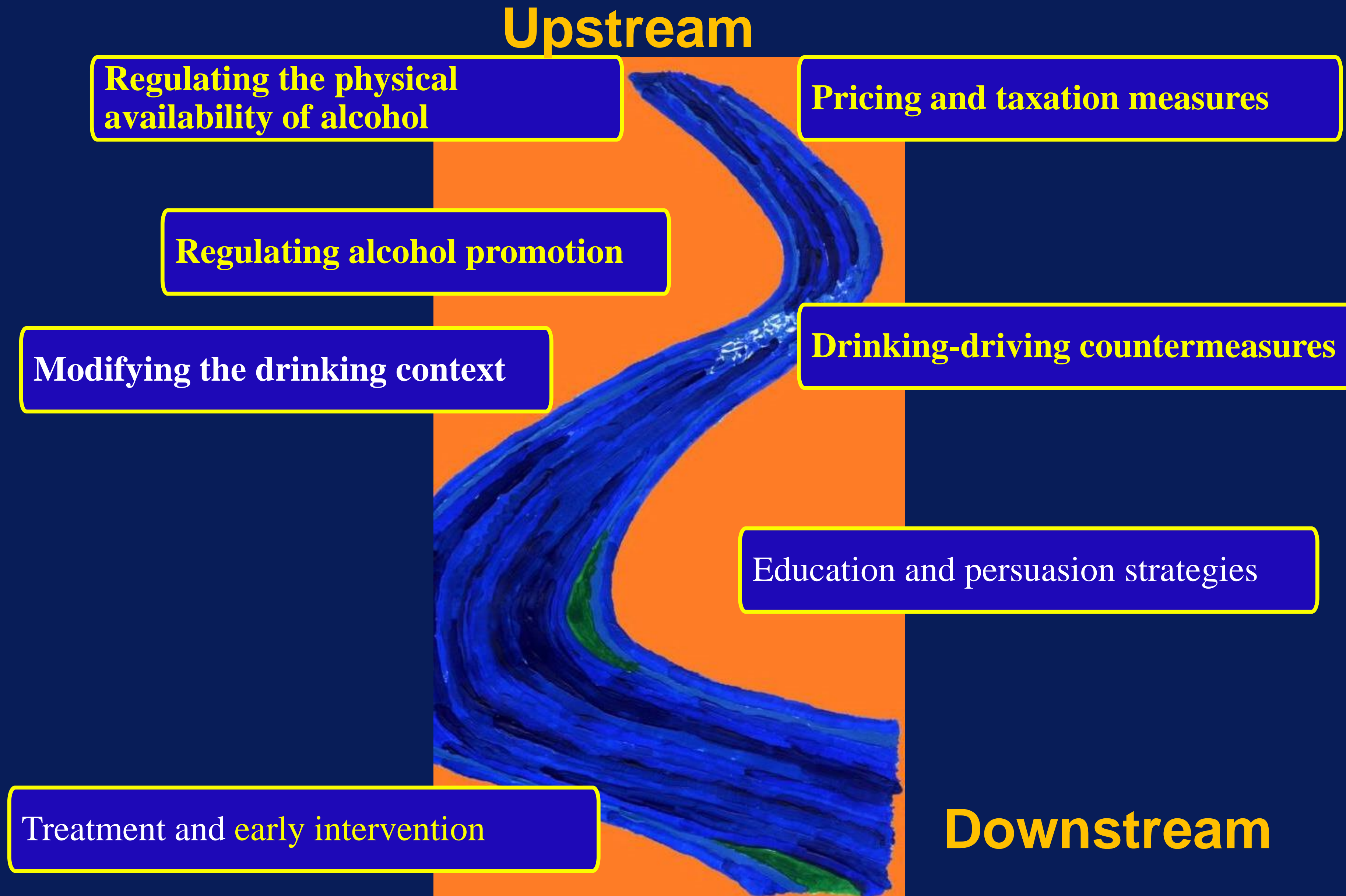
Advantages of looking upstream

Ultimately, the value of approaching addiction problems within a public health framework is that it draws attention to the 'upstream' sources of the damage, as opposed to attributing alcohol, drug and gambling-related problems exclusively to the personal behavior of the individual.

‘Upstream’ sources of the damage: Availability Theory

- Affordable prices/cheap alcohol/more disposable income
- Easy availability/convenience
- A culture that accepts and even “normalizes” drinking, smoking and gambling
- Aggressive marketing of harmful products, including opioids, alcohol, tobacco, gambling, vaping equipment.
- Lack of regulatory controls

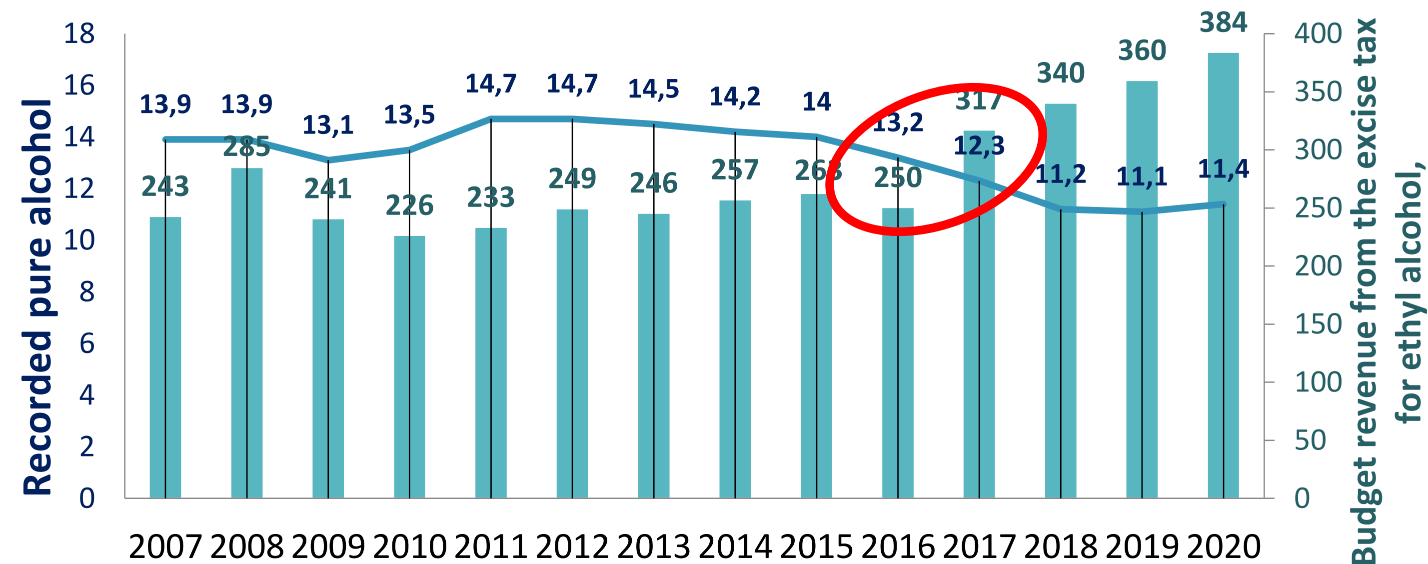
Strategies to reduce alcohol-related harm, including the WHO SAFER "Best Buys" and other interventions



Alcohol tax policies and mortality: Lithuania

In 2017, beer and wine +110%; spirits +20%

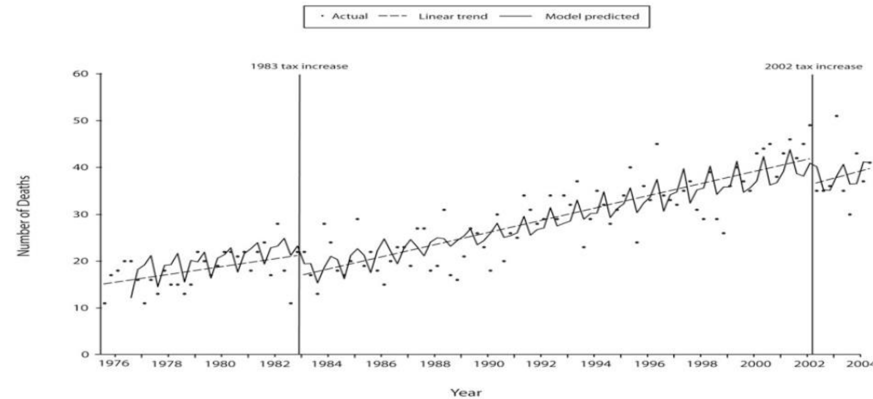
- Mortality gains in the next year (until 1.3. 2018): > 1,000 deaths avoided!
- Fiscal gains



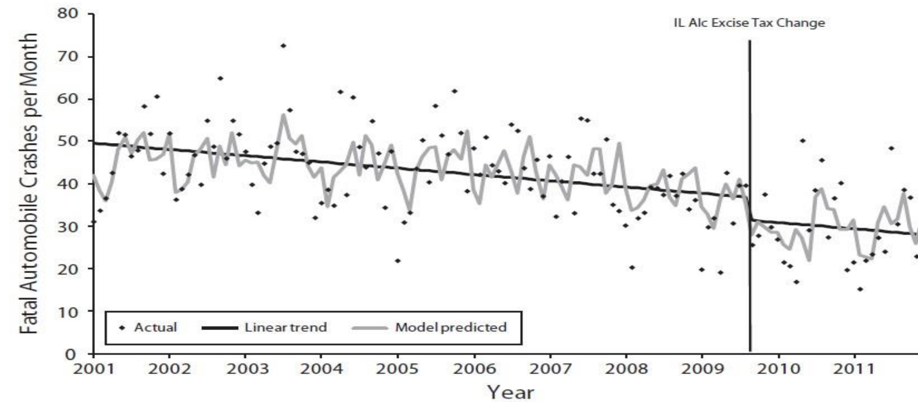
Source: Statistics Lithuania

The effects of alcohol taxation on alcohol-related harms

- **Reductions in frequency of alcohol-related disease mortality in Alaska after alcohol taxation increases in 1983 and 2002** *(Wagenaar et al., 2009)*



A reduction in fatal alcohol-related motor vehicle crashes per month in Illinois after tax increase in 2009 *(Wagenaar et al., 2015*



How upstream measures can improve treatment effectiveness: Alcohol Use Disorders

Strategy	Relation to treatment
Taxing and pricing policies (e.g., Minimum Unit Price, tax increases)	Can reduce the amount consumed by heavy drinkers and alcoholics
Physical availability controls	Reduce the convenience of acquiring and consuming alcohol
Marketing controls	Reduce the chances of relapse
Drink-driving policies	Motivate treatment-seeking
Modifying the drinking context (server training, drink limits, community mobilization)	Reduce opportunities for heavy drinking and violence

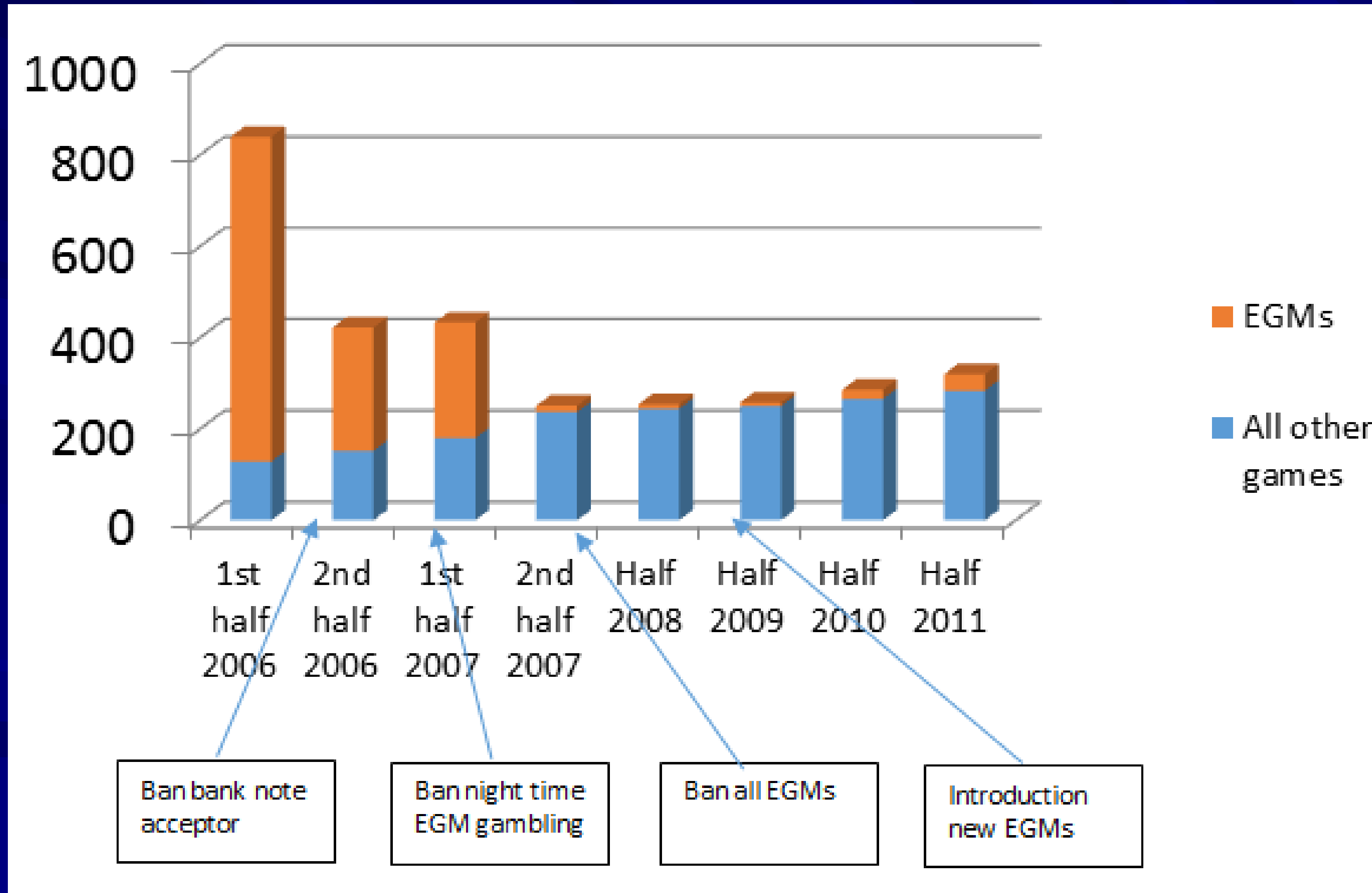
Supply Control Programs to control illegal drugs

- Alternative development, interdiction, enforcement, punishment
- Supply control interventions can produce market disruptions, but they are transient in nature
- Local or street-level enforcement can be effective but is probably not a viable strategy for reducing drug use in the long term
- Although supply control interventions absorb the bulk of drug control spending in most nations, the evidence supporting these interventions is not strong.

Gambling policy: A Natural Experiment in Norway (Engebø and Gyllstrøm, 2009)

- EGM gambling increased dramatically in Norway in the 1990s in response to technological developments and to simultaneous liberalization of gambling policy.
- Restrictions on EGM gambling included:
  - A ban on bank note acceptors (from July 1st 2006)
  - A ban on night opening (from January 1st 2007)
  - A temporary ban on all EGMs (from July 1st 2007)
  - In 2009 a new type of less harmful EGMs was introduced with limited audio-visual stimuli, automatic game abruption, no cash pay-out, and fixed upper limits for losses
  - A mandatory personal gambling card helped to enforce minimum legal age and offered options to restrict maximum losses and to impose self-exclusion.

Figure 9.1 Number of help line calls by half year and main type of gambling problem



Lessons learned: Optimal components of an addiction service system

- *Flexibility*, to adapt to changes in substance use trends and technologies (e.g., vaping, fentanyl, digital marketing)
- *Integration* with primary care, criminal justice, mental health care
- *Coordination* through Needs-based Planning
- Supported by workforce development innovations and universal policy measures

Can a public health approach that includes the WHO SAFER initiative help to meet the National Health Plan priorities for Estonia?

Increase life expectancy:	YES
Reduce health inequalities:	YES
Expand health system revenue base:	YES

Better management of noncommunicable diseases: YES

Reap benefits of the e-health system	YES
especially for care integration:	YES

Conclusion

- Ultimately, policymakers and the general public want to know two things about addiction treatment services: (1) Does treatment work well enough to alter the course of a person's self-destructive addictive behavior? and (2) Can the totality of treatment services reduce the human and financial costs to society, especially in terms of addiction-related disease, crime, violence, traffic fatalities, and other problems?
- The first question can be answered on the basis of 50 years of clinical research indicating that most treatment services delivered in most treatment settings contribute to short-term abstinence and, to a lesser extent, long-term recovery.
- As for the second question, the evidence is suggestive but not definitive. To the extent that universal measures can also affect addiction problems, service systems would benefit from greater coordination with upstream policies for alcohol, tobacco and gambling.

Three books about addiction policy and public health
(Email Tom Babor for summaries or e-copies: Babor@uchc.edu)