

Dramatic problems and weak policy

Trends in alcohol consumption, harms and policy:
Russia 1990–2010

Patterns of alcohol consumption

■ How much Russians drink

The level of alcohol consumption in Russia is among the highest in the world (European Health for All database, 2008; Nemtsov 2006). Historically, and even in recent years, Russian data on consumption are notoriously unreliable for several reasons, including consumption of home-produced alcohol and non-beverage alcohol-containing substances (e.g., aftershave, medicinal compounds, and antifreeze), considerable illegal alcohol production, the business practice of keeping two sets of books to avoid high taxes, and the lack of reliable surveys of population consumption (Andrienko & Nemtsov 2005; McKee et al. 2005; Nemtsov 2004; 2006). Figure 1 shows annual registered alcohol (state alcohol sales) and combined registered and estimated unregistered alcohol per capita consumption in Russia 1980–2008, in liters of pure alcohol. It should be noted that the data on registered al-

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ABSTRACT

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■ AIMS

This article provides an overview of the major patterns of alcohol consumption (e.g., how much, how, and what Russians drink) and alcohol-related harm (e.g., alcohol-related mortality, injury, and violence) in Russia during the last two decades. We also discuss the main contributors to changes in alcohol consumption and alcohol-related harm and current policy initiatives.

■ DATA

Our review is based on published studies and on routing data obtained from multiple sources, including the Russian Monitoring of the Economic Situation and the Health of the Population, the State Committee for Statistics of the Russian Federation, the European Health for All database, and the Global Status Report on Alcohol.

■ RESULTS AND CONCLUSIONS

Our review of this literature and these data revealed that the level of alcohol consumption (including estimated unregistered alcohol) in Russia remains among the highest in the world. Alcohol-related harm is considered by many to be a national disaster in Russia. Market liberalization, a weak state, and political populism increased supply and affordability of vodka relative to most other products. Gorbachev's anti-alcohol

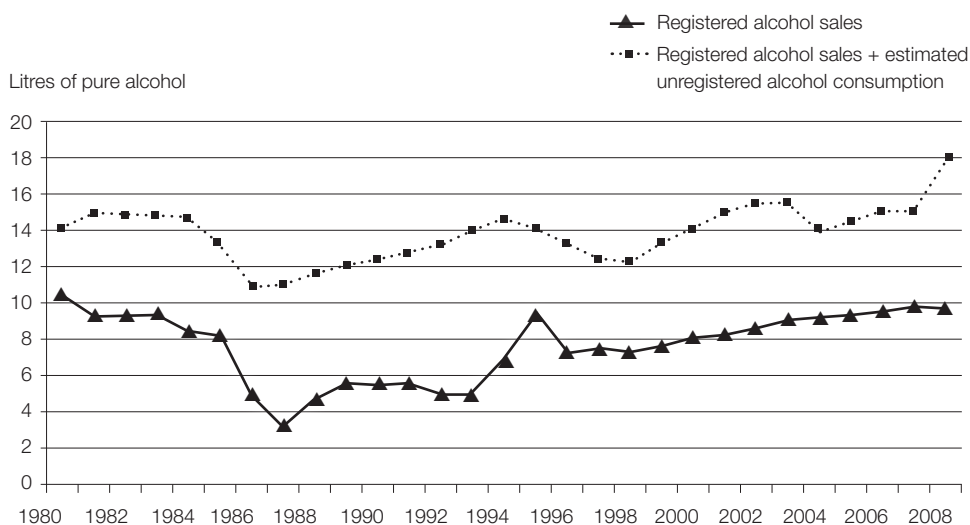
campaign also may have contributed to recent high levels of hazardous drinking because it led to increased home production and large-scale distribution networks of illegal alcohol and alcohol surrogates. All three presidents of Russia during the last two decades have tried to tackle the alcohol problem in the country, but yet unsuccessfully.

■ KEYWORDS

registered alcohol, estimated unregistered alcohol, alcohol-related mortality, alcohol-related violence, factors of alcohol consumption, anti-alcohol campaign, Russia

cohol consumption provided by Goskomstat RF (State Committee for Statistics of the Russian Federation) has normally been calculated per capita for the entire population including infants. Hence, the alcohol consumption as calculated for the population aged fifteen and older in liters of pure alcohol in world practice will be higher (e.g., Tapilina 2007).

The level of consumption held steady in Russia in the early 1980s. In 1985, total (registered + unregistered estimates) alcohol consumption reached 14.2 liters of pure alcohol per person, with a little over 25% in the form of *samogon* (i.e., home-distilled spirits). As a result of Gorbachev's anti-alcohol campaign, state sales decreased by 60% in 2.5 years (from 8.41 in 1984 to 3.31 in 1987) (Nemtsov 1998). Thus, the Soviet government was powerful enough to achieve the main goal of the anti-alcohol campaign and reduced state sales to the level of the period 1955–56. As a result of increased illegal alcohol production and the consumption of non-beverage alcohol, however, true consumption was higher. Nemtsov (2006) estimates that the average Russian drank 10.6 liters of pure alcohol in 1987. Although the anti-alcohol campaign had immediate positive effects, including reducing consumption, decreasing alcohol-related and overall mortality and morbidity, and increasing life expectancy, some argue that it proved to be a total or near-total failure (Partanen 1993), with evidence of long term negative consequences that we will discuss later. These health-related improvements accompanying the campaign did not last and were followed by considerable deterioration in health (Nemtsov 2002; Shkolnikov et al. 1997). There was a steady increase in registered as well as unregistered alcohol consumption beginning in 1987 that continued until 1994–1995, which was the height of the economic and political instability in the years immediately following the collapse of the Soviet Union (Nemtsov 2002; 2006). Total alcohol consumption in 1994 was approximately equal to that in the early 1980s. Consumption then declined for about half a decade before beginning another climb that took it above the levels of the early 1980s. Recent estimates announced by President Medvedev in his speech in August 2009 (Shuster 2009) suggest that Russians drink nearly 18 liters of pure alcohol per person per annum (including both registered and unregistered alcohol consumption). This jump from 2007 to 2008 can possibly be explained by the announcement of the



Notes: Data for the annual registered alcohol are from Goskomstat (State Committee for Statistics of the Russian Federation) (2009) and Nemtsov (1998). Data for the total registered and estimated unregistered alcohol consumption for the 1980–2001 period come from Nemtsov (2006). Data for 2002 are taken from the Russian Monitoring of the Economic Situation and the Health of the Population (RMEZ), as shown in Tapiina (2007). Data for the period of 2003–2007 are from Kalabekov (2007). The estimates of total alcohol consumption in 2008 were announced by President Medvedev in his speech on August 2009 (Shuster 2009).

Figure 1. Annual registered alcohol / state alcohol sales (solid line) and combined registered and estimated unregistered alcohol (dotted line) per capita consumption in Russia 1980–2008, in liters of pure alcohol.

most radical estimates immediately before launching a new anti-alcohol campaign in 2010 (The concept of public policy 2009).

■ How Russians drink

Alcohol-related harm in Russia is not due solely to the amount that Russians drink, but also to what and how they drink. Distilled spirits, mainly vodka, are the preferred form of alcohol. Strong liquor accounts for nearly three-quarters of all alcohol consumed by Russians, which is considerably more than the 25–30% share in many other nations (Zaigraev 2009, 74). Binge drinking is also common among Russians. Survey data from Bobak et al. (1999) revealed that

nearly one-third of Russian men admitted to drinking at least a quarter liter of vodka (which contains 78.5 grams of ethanol) at one sitting at least once per month. There is no standard drink measure in the country, at least as understood by the average Russian. However, since at least World War II average Russians have picked up a very vague idea of a measure of one drink of spirits as 100 grams (Ogurtsov 2000; Pokhlebin 2005, 117). In fact, current research by Cook et al. (2010) shows that due to cultural understandings, in many contexts a “drink” or “portion” of spirits to the average Russian means a large glass of spirits containing at least 200 grams.

Table 1. Degree of risk of alcohol consumption among the drinking population, in percentages.

Groups of alcohol consumers in terms of degree of risk	1994	1996	1998	2000	2002
Low degree of risk: 1–40 grams/per day for men 1–20 grams/per day for women	81.9	80.8	82.1	77.4	74.5
Medium degree: 41–60 grams/per day for men 21–40 grams/per day for women	6.4	6.8	6.5	7.8	8.1
High degree: 61–100 grams/per day for men 41–60 grams/per day for women	4.6	5.1	5.0	5.4	5.1
Very high degree: 101 grams or more/per day for men 61 grams/or more per day for women	7.1	7.3	6.4	9.5	11.3
Level of alcoholization of the population: proportion of people with medium, high, and very high degree of risk of alcohol consumption	18.1	19.2	17.9	22.6	25.5

Note: Data are from RMEZ for 1994–2002 (from Tapilina 2007, 89).

Using data from the results of the nationwide Russian Monitoring of the Economic Situation and the Health of the Population (RMEZ) between 1994 and 2002, Tapilina (2007) subdivided the Russian population into four groups based on their degree of risky (immoderate or binge) alcohol consumption. (Note all references to per capita consumption using RMEZ data in this article will use the population aged 15+ for standardization, not the entire population.) The information summarized in Table 1 shows that most Russians who consumed alcohol remained within the limits of relatively harmless or low level alcohol consumption, which consists of less than 40 grams of pure alcohol per day for men and less than

20 grams per day for women. The average annual rate of alcohol consumption for this group varied during this period from 3.9 to 4.3 liters of pure alcohol per person. Six percent of Russians consuming alcohol in 1994 and eight percent in 2002 were characterized as moderately risky drinkers (41–60 grams of alcohol per day for men, 21–40 grams for women). About 11% of Russian drinkers in 1994 and 16% in 2002 were categorized as risky or very risky drinkers (≥ 60 grams of alcohol per day for men and ≥ 40 grams for women). The last row of the Table shows a significant increase from 18% to 26% between 1994 and 2002 of the proportion of people with at least a medium degree of risk of alcohol consumption.

■ Drinking by adolescents and young adults

About 75% of Russians aged 15 and older consume alcohol, and this proportion remained relatively constant between 1994 and 2002 (Tapilina 2007). The recent RMEZ study demonstrates that the number of adolescents aged 14–16 and 18–24 who ever drank alcohol decreased slightly from 2006 to 2008 (Denisova 2010b). The average number of alcohol consumers abruptly rises from about 25% among adolescents aged 14–16 to nearly 75% among those aged 18–24. This may in part be due to a 1996 government decree that limited the sale of alcoholic beverages, including beer, wine and vodka, to people younger than 18 years. According to recent sociological research, however, the age at which Russian adolescents begin consuming alcohol decreased from 16–17 to 14–15 over the last two decades (Zaigraev 2009, 75). The mean age of onset for beer drinking is 12 years, for wine 15 years and for vodka 16 years (Sheregy & Arefiev 2003). According to some data, 82% of Russians aged 12–22 consume alcohol and about one-quarter of this young age group abuse alcohol (Arefiev 2002), with the pattern of binge drinking discussed above also prevailing among Russian adolescents and young adults.

The prevalence of alcohol consumption among young Russians relative to those in other nations is evident in a recent cross-national study of university students in Australia, Bulgaria, France, Italy, Japan, Poland, Russia, Romania, and the United States (Denissenko 2006). Of the 1,703 students from nine universities in three Russian cities (Moscow, Velikiy Novgorod, and Ufa), only one percent of female students and one percent of male students re-

ported that they did not consume alcohol. This abstention rate is in stark contrast to the rates from nations like the United States, where 23% of female and 19% of male college students reported that they did not drink, and Poland, where the corresponding proportions were 44% for females and 22% for males.

■ Drinking by gender

Based on RMEZ data from 1994 to 2002, 82–88% of men and 63–71% of women consumed alcohol (Tapilina 2007). The proportion of those with very high risk levels of alcohol consumption (more than 101 grams per day for men and more than 61 grams per day for women), doubled for women and increased 60% for men from 1994 to 2002. There was also an increase during this period in the overall proportion of women who drank (Zaigraev 2009, 75). However based on RMEZ data from 2006 to 2008 the average number of alcohol consumers decreased to 70% among men and 49% among women (Denisova 2010b).

Among younger Russians, women are consuming alcohol at rates that are becoming more comparable to Russian men. For example, among 15–20 year old people who presented to medical centers with alcoholism concerns, the number of men and women abusing low-alcohol drinks did not differ significantly (Egorov 2003). Surveys of Russian school children show that 80–94% of female high school seniors consume alcohol, and in big cities the proportion of girls consuming alcohol exceeds the proportion of boys of the same age consuming alcohol (Egorov & Shaidukova 2005). In general, one-third of males and one-fifth of females aged 11–24 years

old consume alcohol every day or once every two days (Sheregy et al. 2001). According to RMEZ data in 2006–2008, 17% of young people aged 14–24 consumed alcohol 2–3 times per week or more often (Denisova 2010b).

■ How often Russians drink

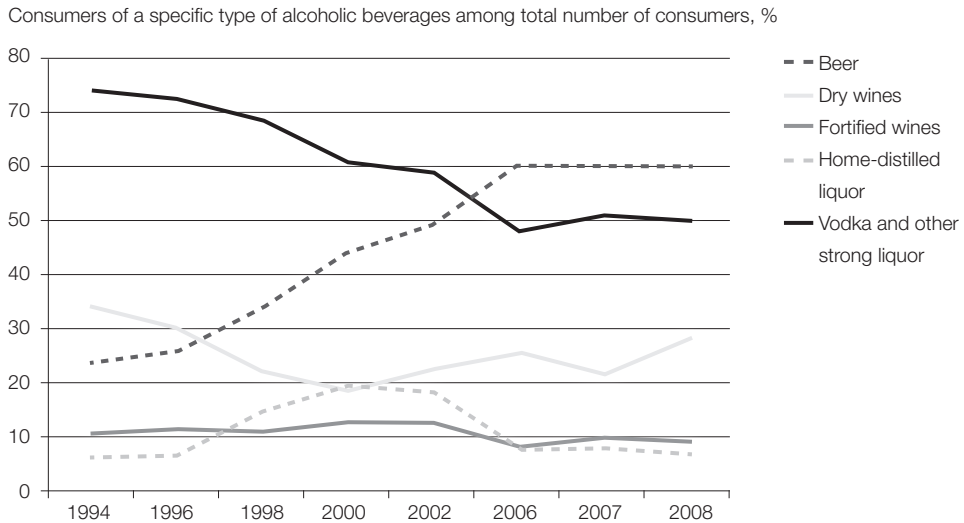
Recent studies show that the frequency of the alcohol consumption in Russia is comparable to some Northern European countries such as Finland and Sweden and much less to countries such as Italy, Great Britain and Germany (Alcohol in Postwar Europe, 2001; Denisova 2010b; Tapilina 2007). For example, among males six percent of Russians, seven percent of Finns, eight percent of Swedes and 45% of Italians consumed alcoholic drinks frequently (every day or 4–5 days per week) (Denisova 2010b). Russian women do not drink alcoholic beverages more frequently than women in Northern Europe. The average frequency of alcoholic beverages consumption in Russia has increased from 1994 to 2002 (from 52 to 64 times per year) (Tapilina 2007). However, comparing with other European countries this is not an essential factor determining problem drinking and negative consequences of alcohol consumption in Russia. The problem is how much ethanol Russians consume per occasion and what kind of alcoholic drinks they consume (Andrienko & Nemtsov 2005; Bobak et al. 2004; Pridemore 2002; Rehm 2009). For example, in their study of drinking patterns in three cities in Russia, Poland and Czech Republic, Bobak et al. (2004) found that the rates of problem drinking and of negative consequences of drinking on family life, work, finances and health were much higher among males in

Russia than males in Czech Republic or Poland. This contrasted with substantially lower mean drinking frequency in Russia (67 drinking sessions per year, compared with 179 sessions among Czech men and 79 among Polish men). However, Russians consumed the highest dose of ethanol per drinking session (means of 71 grams for Russians, 46 grams for Czechs, and 45 grams for Poles), and had the highest prevalence of binge drinking (≥ 80 grams of ethanol at least once a month).

■ What Russians drink

While vodka remains the alcohol beverage of choice in Russia, Figure 2 reveals that there have been changes in preference since the collapse of the Soviet Union. According to the RMEZ survey, the share of vodka consumers among the total number of alcohol drinkers decreased from 74% in 1994 to 58% in 2002 (Tapilina 2007) and to 50% in 2008 (Denisova 2010b). Figure 2 shows that among all alcohol drinkers, those consuming alcohol surrogates and home-produced alcohol tripled from six percent to 18% from 1994 to 2002 (Tapilina 2007; respondents could select more than one beverage) and then dropped back to eight percent in 2006–2008 (Denisova 2010b).

The increase in the consumption of home-produced *samogon* was a new trend in the early 1990s, likely a result of Gorbachev's anti-alcohol campaign of the mid-1980s and the accompanying massive increases in homemade alcohol and the large-scale distribution networks of illegal alcohol and surrogates during that period (Zaigraev 2009, 79). Some argue that Gorbachev's anti-alcohol campaign also contributed to recent high levels of hazardous



Note: Data from RMEZ in 1994–2002 (Tapilina 2007) and RMEZ in 2006–2008 (Denisova 2010b).

Figure 2. Consumers of various kinds of alcoholic beverages among the total number of alcohol consumers, by percent.

drinking among the Russian population (Nemtsov 2002). Moreover, the campaign was conducive to the growth of illegally and home-produced alcohol, which was not only available anytime but was also considered by many Russian citizens to be “purer and more harmless” than other alcohol drinks (though in reality the quality and safety was unregulated). A federal law in November 1995 that repealed the state monopoly on the production and distribution of wines and spirits was also associated with increased consumption of unregistered alcohol. When the prices of vodka soared, the consumption and production of surrogates (i.e., non-beverage alcohol) increased dramatically (Leon et al. 2009; Nemtsov 2006). These products are untaxed and much less expensive than vodka. This gave rise to a new industry

that produced cheap non-beverage alcohol in the form of medicinal compounds and aftershaves (Kalitin 2009). These alcohol surrogates often contain very high levels of pure alcohol (up to and even over 90%) and other toxins (McKee et al. 2005).

Another noticeable change is that beer is becoming increasingly popular in Russia (Denisova 2010b; Tapilina 2007), especially among younger people. Among those who drink, the proportion aged 15–30 who consumed beer increased from 33% to 70% between 1994 and 2002 and to almost 80% in 2006–2008 (Denisova 2010b). An important accompanying trend among these young people was that many more refrained from drinking vodka. Among those who drink, the proportion aged 15–30 who drank vodka decreased from 67% to 48% between 1994 and 2002 (Tapilina

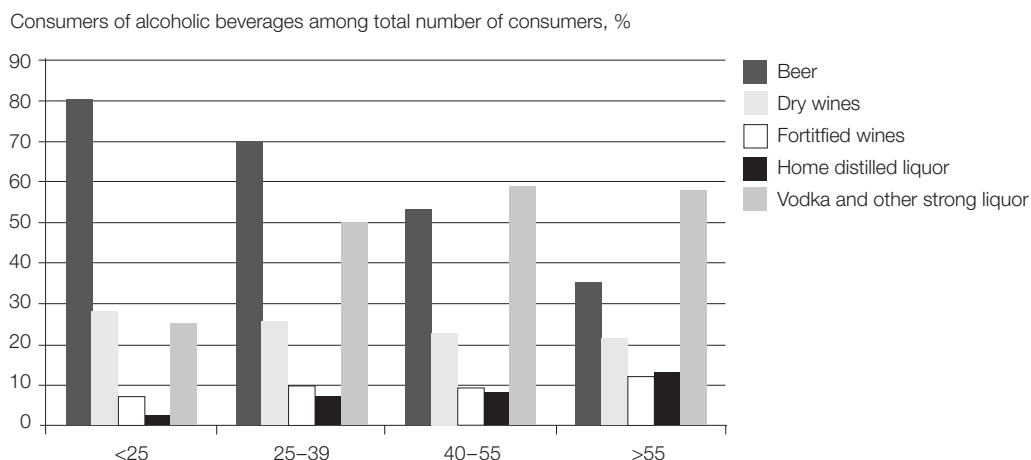


Figure 3. Beverage preference (among those who drink) by age in Russia, in percent.
Note: Data from RMEZ in 1994–2002 (Tapilina, 2007) and RMEZ in 2006–2008 (Denisova 2010b).

2007) and leveled off at 25% in 2006–2008 among young people aged 15–25 (Denisova 2010b). Figure 3 shows the drinking structure of various kinds of alcoholic beverages among the total number of alcohol consumers (%) by age in 2006–2008.

A comparative analysis of alcohol sales (measured by ethanol content) in 1970 and 2007 computed by Kalabekov (2007) confirms this trend. In 1970, wine was 27% of all alcohol sales, placing it second behind vodka (64%) and ahead of beer (9%). In 2007, beer sales had increased to 32%, moving beer into second place behind vodka (55%) and ahead of wine (11%). When measured by consumed pure alcohol, the highest position in the alcohol market is still held by vodka, though the leading position in sales in terms of money is beer. Along with the increased sales, the average alcohol content of beer has also grown. At the beginning of 1990s, prepackaged alcohol cocktails (5–12% ethanol) appeared in Rus-

sia and quickly became very popular among young people. In 2002, Russia was fourth in the world in the production of low-alcohol cocktails after Japan, the United States, and Great Britain (Kalabekov 2007, 322).

While all these changes mark important trends, Russian drinking is still mainly characterized by consumption of spirits in binges (Leon et al. 2009). Between 1994 and 2002, 78–84% of pure ethanol was consumed in the form of vodka and *samogon* (Kalabekov 2007, 324).

Geographical and social distribution of alcohol consumption

The increase in the level of alcohol consumption between 1994 and 2002 and then from 2005 to 2008 was felt across the entire nation. However, the rate of increase as well as level of alcohol consumption is higher in Russian rural areas than in towns and cities, and lower in predomi-

nantly Muslim regions relative to the rest of the nation (Treisman 2008). In general, consumption and alcohol-related harm are higher in eastern relative to western Russia (Pridemore & Kim 2006). The greater increase and level of consumption in rural areas is associated with, among other things, the social and economic decline of these areas during the last two decades (Tapilina 2007; Zaigraev 2002).

Socioeconomic position seems only to be of moderate importance for frequency and amount of beer, wine and spirits consumption in Russia (Denisova 2010b; Tapilina 2007). The number of consumers of vodka and beer among those who drink alcohol in different income groups spreads nearly evenly (Denisova 2010b). Andrienko and Nemtsov (2005) found some interesting differences in the amount of alcohol consumption (in ml of ethanol per day) by income of respondents. Their results revealed that consumption of ethanol in the form of vodka and home-distilled liquor was the highest in the three poorest groups. While the structure of alcohol consumption across different levels of education is nearly similar, more educated people seem to drink more dry wines and champagne and in general drink alcohol fewer times per week than people with a lower education (Denisova 2010b).

Nevertheless, it is important to emphasize that socioeconomic factors have been found to be strongly associated with indicators of hazardous drinking such as the frequency of hangovers and periods of excessive drunkenness (*zapoi*) and consumption of non-beverage alcohol surrogates (Leon et al. 2007; Tomkins et al. 2007). Less educated persons, unemployed persons and persons who do not have a car

or central heating were most likely to have proxy reports of these hazardous drinking behaviors (Tomkins et al. 2007).

Alcohol-related harm in Russia

Many scholars, politicians and public health experts consider drinking in Russia to be a national disaster. The high level of consumption, together with a pattern of binge drinking, is associated with deleterious effects on health, including premature overall and alcohol-related mortality (Denisova 2010a; Leon et al. 2007; Leon et al. 2009), family disruption, absenteeism at work, and high rates of violence, including rates of homicide and suicide that are among the highest in the world (Landberg 2008; Pridemore 2002; 2006). In recent years the number of people officially diagnosed with alcoholism has been around 2.25 million (Kalabekov 2007, 322). In the entire population, there was a 12% increase in people diagnosed with alcoholism during 1990s, and there was a 28% increase among women (Zaigraev 2009, 75). Based on ICD-diagnoses the real number of people with alcoholism well exceeds that of people diagnosed in a clinic, with some estimates placing the number at about 5 million people, or 3.4% of the population, which is 1.5–2 times greater than that in most European countries (Koshkina et al. 2002). The annual number of people abusing alcohol in Russia has been estimated to be 10–15 million, or about 10% of the population (Kharchenko et al. 2005).

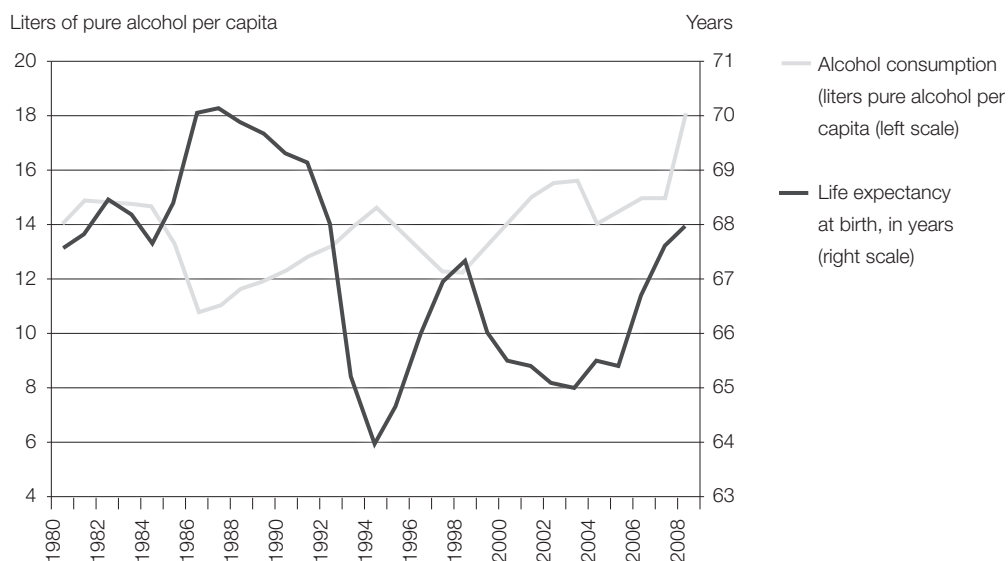
■ Alcohol and mortality

Alcohol-related mortality, including internal and external causes due directly and indirectly to alcohol, took the lives of about

90,000–100,000 Russians annually during the 1990s (Zaigraev 2009; see also Pridemore & Kim 2006). Figure 4 shows that the changes in alcohol consumption in Russia coincide with parallel movements in life expectancy. Data on crude death rates (not shown here) reveal a similar pattern.

The changes in the aggregate death rate reflected big changes in alcohol-related causes of death. Treisman's study (2008; 2010) has shown that increases in the affordability of vodka were associated with statistically significant increases in mortality in Russia. In the European subregion containing Russia, Rehm and colleagues (2006) have estimated that 27% of deaths among men aged 15–59 years in 2002 were attributable to alcohol. According to

mortality data from the Russian Ministry of Health, there were 47,509 deaths directly related to alcohol (e.g., poisonings, liver cirrhosis) in Russia in 2000, which corresponds to an age-adjusted rate of 33.6 alcohol-related deaths per 100,000 persons (Pridemore & Kim 2006). Males accounted for 78% of these deaths. The sex-specific age adjusted alcohol-related death rate was 55.4 and 14.7 per 100,000 for males and females, respectively. In 2001, the human toll from accidental alcohol poisoning in Russia accounted for over 41,000 deaths, equating to a rate of 28.5 per 100,000 of the population, or over 120 times the European average (Stickley et al. 2007). The death rate from ischemic heart disease in the Russian Federation is



Source: Nemtsov 2006; European Health for All database 2008.

Figure 4. Total registered and estimated unregistered alcohol consumption per capita and life expectancy at birth in the Russian Federation, 1980–2008.

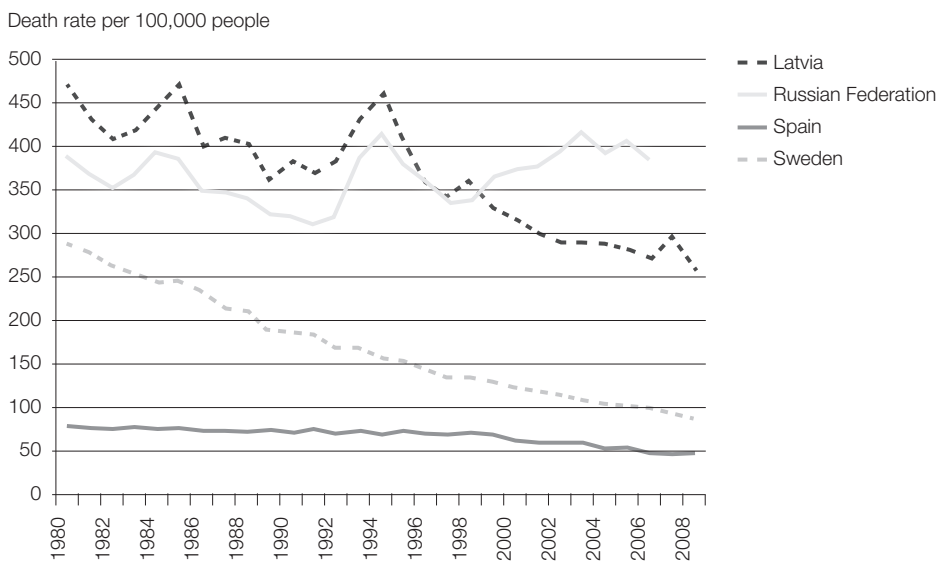
also much higher than in other countries in Western Europe (see Figure 5) which may be partly attributable to the higher alcohol consumption rate in Russia (Leon et al. 2010; McKee et al. 2001).

According to the General Sanitary Physician, Gennady Onishchenko, in his interview with the radio station “Echo of Moscow” on September 19th, 2009, more than 2.5 million Russians suffer from alcoholism. Alcohol poisoning kills an average of 30,000 people in Russia each year, twice the number of Soviets who died during the 10-year war with Afghanistan in the 1980s. Succinctly put, a case-control study by Leon et al. (2007) found that 43% of premature deaths among working-age (25–54) Russian men were attributable to

hazardous drinking.

Analysis based on RMEZ data further confirmed that alcohol consumption increases mortality hazard rates (Denisova 2010a). It also demonstrated that frequent (every day or 4–6 times per week) consumption of vodka (pure vodka or vodka with other alcohol drinks) reduces the life expectancy 9–10 years on average, while frequent consumption of beer (only beer or beer with other alcohol drinks except for vodka) has no statistical effect on life expectancy (Denisova 2010b).

Zaridze et al. (2009) analyzed trends in total and cause-specific mortality in Russia by examining the records of 24,836 forensic autopsies carried out during the period 1990–2004 in the city of Barnaul



Note: Data are from European Health for All database (2008).

Figure 5. Age-standardized death rate for ischemic heart disease in the Russian Federation, Latvia, Spain and Sweden for the period of 1980–2008, all ages per 100,000.

with respect to blood alcohol level. The authors found that a very high proportion of decedents whose death was attributed to 'other' or 'not classified' cardiovascular diseases had lethal or potentially lethal concentrations of ethanol in their blood. They concluded that excessive alcohol intake was a major cause of premature mortality among Russian males, although many alcohol-related deaths were wrongly attributed to diseases of the circulatory system (Zaridze et al. 2009).

Some Russian experts argued that the increase in alcohol-related mortality in 2003 and 2004 in Russia may be mainly attributed to the wide availability of illegal alcohol, the quality of which was unregulated and which often contained toxic substances (Nemtsov 2004). However, Kharchenko et al. (2005) showed in their study that 45,000 deaths associated with alcohol poisoning were caused primarily by acute intoxication among alcoholics and those with hazardous patterns of drinking, and not by the availability of illegal toxic alcohol or drinking surrogates.

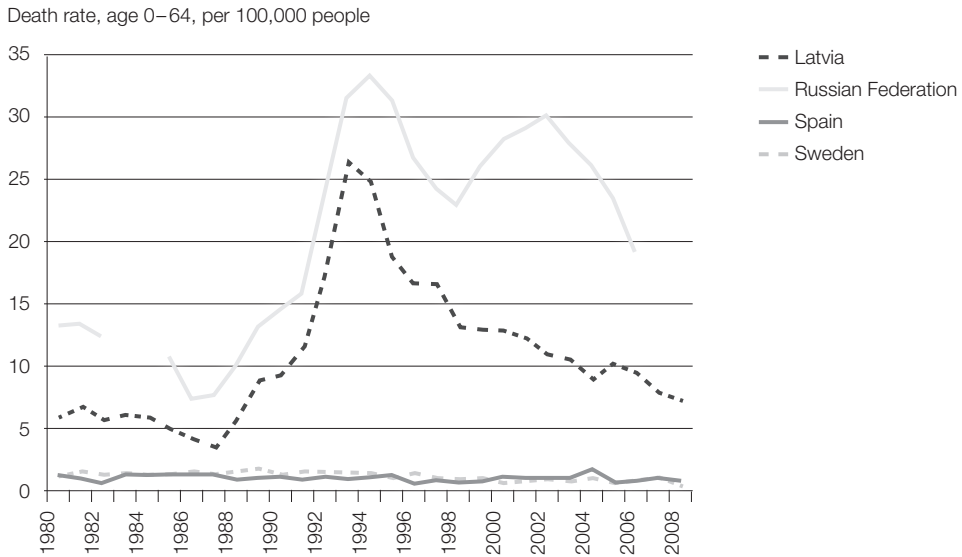
■ Alcohol, injury, and violence

The social consequences of the alcohol problems include injuries and violent harms such as family violence, suicide, and homicide. Figure 6 shows the age-standardized death rate for homicide and intentional injury in the Russian Federation and several other European countries, with Russia being an obvious leader in violent deaths, a sizable proportion of which are alcohol-related (European Health for All database 2008).

In Gondolf and Shestakov's (1997) study of spousal homicide, the perpetrator had

been drinking in 60–75% of the male-perpetrated homicides. In a family violence study examining the Central-Chernozem region between 1990 and 2001, 77% of offenders and 47% of victims drank often and/or abused alcohol (Ilyashenko 2003). In murder incidents within the family, 86% of offenders and 62% of victims were intoxicated (Antonyan et al. 1999). In the Survey of Russian Marriages (Vannoy et al. 1999), the husband's use of alcohol was by far the leading cause of disagreement. Among married/cohabiting women, of the 187 respondents who had reported physical abuse in their relationships, 51% stated that their husband's alcohol use was the subject of the disagreement that gave rise to the last violent argument. Of the 97 divorced women who reported physical abuse, the husband's alcohol use caused the conflict that gave rise to the physical abuse in the former marriage in 57% of the cases. In addition, multivariate analyses using only the married/cohabiting couples showed that both frequency of husband's drinking and binge drinking by the husband were significant predictors of physical abuse on wives, even after controlling for education, employment, and income (Cubbins & Vannoy 2005). Lysova and Hines (2008) found an association between intimate partner violence and binge drinking among Russian university students, and this association was stronger for the female students than for the male students.

Alcohol abuse often leads to deterioration of social and family ties, and it can reduce individual self-control and provoke depression, which is a primary cause of suicide (Landberg 2008; Rehn et al. 2001). Pridemore (2006) showed that, net of



Note: Data are from European Health for All database (2008).

Figure 6. Age-standardized death rate per 100,000 residents for homicide and intentional injury (for those aged 0–64) in the Russian Federation, Latvia, Spain and Sweden, 1980–2008.

several socioeconomic and demographic variables, Russian provinces with higher rates of heavy drinking have higher suicide rates. Pridemore and Chamlin (2006) employed time series analysis on annual data in Russia between 1950 and 2002, revealing that changes in heavy drinking were associated with changes in suicide rates. A study of the 16,000 completed suicides in Moscow in 2005 showed that about 40–50% were committed by people who were under the influence of alcohol (Voitsekh 2006). In general, over 60% of suicide deaths and almost 40% of known attempted suicides were committed by people who abused alcohol over the previous year (Khalturina & Korotaev 2005).

Alcohol has also been shown to be asso-

ciated with homicide in Russia. Pridemore (2002) found that Russian provinces with higher levels of heavy drinking had higher levels of homicide, even after controlling for several other key factors. This provincial-level association is not new, however, as Stickley and Pridemore (2007) used historical data from 1910 for western Russian provinces and found the same association. Pridemore and Chamlin (2006) used time series data between 1950 and 2002 for all of Russia and found a significant positive association between heavy drinking and homicide. Further, Pridemore and Eckhardt (2008) employed homicide victim, offender, and event-level in Russia, finding that alcohol-related homicides differed from non-alcohol-related homicides along

a number of characteristics, including victim-offender relationship and motive. Finally, though examining non-lethal violent victimization, a recent study of Moscow residents found that men who binge drink were more than twice as likely than those who did not to have been a victim of violence (Stickley & Pridemore 2010).

Main contributors to changes in consumption and harm

■ Proximal factors

The rapid increases in consumption and alcohol-related harm in the early and mid-1990s coincided with the dissolution of the Soviet Union and the ensuing political, economic, social, and ideological changes, all of which probably played a role in demand for alcohol during this period. This demand was met with increased supply, including greater availability of alcohol and a reduction in cost relative to other products (Reitan 2000; Treisman 2010). This accompanied changes in the affordability of vodka that were brought about, initially, by a change in relative prices. As market liberalization caused prices for most products to soar in the early 1990s, relative increases in the nominal price of vodka were smaller and thus the real price of vodka fell sharply. Treisman (2010) presented evidence that the rise in drinking and hence mortality in recent years in Russia resulted from a sharp drop in the price of vodka relative to prices of other goods, including beer.

Results of a Levada Center opinion poll of a representative sample of 1,589 Russian adults in November 2006 confirmed that alcohol consumption in Russia is sensitive to price (Levada Center 2006). While 70% said that someone in his or her fam-

ily drank hard liquor, only 26% said they would be able to buy vodka at a price of 120 rubles a half-liter. The average price in the average region in late 2006 was 88 rubles a half-liter, or roughly \$3.30. In terms of mortality, however, analysis based on the Russian Longitudinal Monitoring Survey (RLMS) covering the period from 1994 to 2007, showed that the role of vodka prices in relative and absolute terms was insignificant in determining mortality (Denisova 2010a). Moreover, Denisova (2010a) found a weak positive association between alcohol prices and mortality hazard that could be attributed to the adverse effect of substitution of cheaper and toxic liquids documented in the RLMS data earlier by Andrienko and Nemtsov (2005). One of the reasons of these different results may be that the crude death rate for working-age men surveyed in the RLMS is just 4 in 1,000, whereas the actual death rate for working-age men in the national statistics is 13 per 1,000. Thus, it is very likely that many of the alcohol abusers for whom the price of vodka is a constraint were simply left out of the RLMS sample (Treisman 2010).

Treisman (2008; 2010) discusses several possibilities that may have been operating simultaneously to cause the price of vodka to fall in the early 1990s. These include intensified market competition, a drop in real alcohol taxes, and regulation of vodka prices. In the early 1990s, markets in Russia were liberalized – including the market for alcoholic beverages. A presidential decree in January 1992 permitted all Russians to engage in trade. Then, with another decree in June 1992, President Yeltsin abolished the state monopoly on the production and trade of alcohol. This decree

remained in effect until mid-1993, when Yeltsin signed another decree reversing the de-monopolization. Some have suggested that the intense competition between vodka producers and distributors, legal and illegal, forced prices below their previous level in real terms. Broad advertising of alcohol drinks was launched on TV and in other media during this period. Vodka, alcohol surrogates, and cheap spirits from other countries became easily available everywhere and at any time to everyone, including teenagers (Kalabekov 2007, 314).

Another possible reason for the drop in the relative price of vodka might be a progressive decrease in the effective tax (Treisman 2010). Excises and VAT are levied on vodka production and sales. However, collecting these taxes was extremely difficult in the 1990s. The Russian State Statistical Agency estimated that about half of alcohol sales went undeclared (Treisman 2008, 28). In the mid- and late 1990s vodka producers claimed to be operating at only 20 to 30 percent of capacity. Nevertheless, the number of licensed vodka producers rose from 423 in January 1997 to 828 in October 2000 (Panskov 2001). Some were eager to get into the business despite the appearance of overcapacity. Besides the problem of collecting the taxes, the rate of the excise fell in real terms during the decade. From 1992 until late 1997, excises were assessed as a percentage (80–85%) of the cost of production. In late 1997, the system changed to one in which a fixed nominal tax was charged per liter of pure spirits produced.

Another possible explanation is that the decrease in relative price was caused not by market competition or a weak state,

but by misguided policy, specifically the imposition of regulations to prevent the price rising too rapidly (Treisman 2008; 2010). Russian political leaders learned from Gorbachev's anti-alcohol campaign in the mid-1980s that taking away Russians' vodka would elicit loud protest. Beginning in the 1990s, officials at different levels repeatedly tried to prevent the price of vodka from rising because they feared it would be politically unpopular.

Eighty-five percent of the drop in the real price of vodka between December 1990 and December 2005 occurred during two early periods (1991 and January-May 1992), during which state price regulation held down the nominal vodka price while other prices were allowed to rise substantially. From 1992, Russians started drinking more while eating less (Kalabekov 2007, 317). Treisman (2008) concludes that the largest drop in the real price of vodka was the work of the last communist administration of Mikhail Gorbachev. Unfortunately, the government likely propagated policies that indirectly led to a culture of heavy drinking among a sizeable proportion of Russian citizens (Zaigraev 2009).

■ Distal factors

In addition to some proximal risk factors of frequent and excessive alcohol drinking in Russia in the recent years, it's worth outlining the major historical conditions going back to the 13th century, as well as social and economic factors such as expansive state control of vodka, a series of anti-alcohol campaigns, and the transition of Russia toward a free market at the end of the 20th century, all of which are at least partly responsible for the cur-

rent state of affairs with alcohol problems in Russia.

Russian historian of vodka Pokhlebin (2005) has indicated several possible variables conducive to the increased alcohol (mainly, vodka) consumption in 15th-century Russia. First, in the 13th century, wine imported from Byzantium had been heavily suppressed because of the invasion of Tatar-Mongols and the ensuing annihilation of Byzantium. At the same time, the Russian church initiated vehement protests against production of mead and beer because of the strong connection of these beverages with pagan rituals. In 15th century Russians invented production of vodka and its production was at once monopolized by the state to increase revenues from so-called “drunk” money. The Russian ruling class very quickly understood that vodka was ‘the essence of wheat’ – very easy to store, transport, measure, etc. Thus, state control over alcohol production and the huge profits reaped by the state from selling vodka, especially in so called “tsar’s taverns” or “kabaks,” where there was nothing (not even food) but alcohol was an historical factor that played an important role in establishing the so called northern style of alcohol drinking (Ivanov 1987; Kopanev 1987; Pokhlebin 2005; Zorin & Khanutin 2004).

As mentioned above, the unintended consequences of anti-alcohol campaigns (1914–1923, 1985–1987) were also damaging. The campaigns contributed to the consumption of unregistered alcohol and surrogates and to a culture of drinking, including drinking vodka before meals or without meals, heavy drinking occasions, and drinking alone (Nemtsov 2002; Pokhlebin 2005; Zaigraev 2009).

The social and economic chaos after the breakup of the Soviet Union is among the key contemporary socio-economic factors of alcohol abuse in Russia. It might be that Russians were driven to drink by the stress of economic transition, collapse of the social welfare system, lost values of pensions and savings, increased rate of unemployment and poverty. Some experts estimate that the number of economically and socially disadvantaged people deprived of the customary social connections reached 11 million (Zaigraev 2009, 77). Many people drank for self-medication, to forget about severe realities of their lives. Gavrilova et al. (2000, 415) argue that: “Social and economic instability, loss of social capital, and an uncertain future increased the level of aggression and anxiety in Russian society which led to an increase in alcohol consumption,” and Pridemore et al.’s (2007) use of interrupted time series techniques revealed an increase in alcohol-related mortality following the collapse of the Soviet Union. The RMEZ study between 1994 and 2002 highlighted this trend. The largest volume of alcohol consumption was seen among people with low material and economic status. Substantial differences have been observed between respondents with differing degrees of satisfaction with their lives as a whole. In 2002, alcohol drinkers who were completely satisfied with their lives consumed an average of 15.3 liters of pure alcohol, while those who were completely dissatisfied consumed an average of 35.6 liters (Tapilina 2007, 91).

Current policy initiatives

In 1992, Yeltsin abolished the state monopoly on production and sales of alcohol.

Importers took advantage of the situation, which led to an increase in alcohol supply from abroad. Vodka was available around the clock from kiosks on nearly every corner and in markets and from street vendors. In 1992, for the first time in Russia, a system of excise taxation was introduced in which tax rates were established as a percentage of the price of the product or its cost. Alcohol manufacturers and importers of alcohol, however, often understated the selling price, leading to a significant shortfall in tax revenue. In 1994, Russian mortality rates peaked and life expectancy fell to less than 58 years for males and 71 years for females. In some parts of the country the decline in life expectancy was even greater, falling below 50 years for men. Realizing the role that alcohol played in this threat, the government implemented in 1995 the law "On the state regulation of production and turnover of ethyl alcohol and alcohol-containing products." The new law prohibited the sale of alcohol in kiosks, to minors, and near schools. Advertising of alcohol (except beer) on television was completely banned. Further restrictions on alcohol distribution were introduced in 1997, including a new system of levying a specific excise tax on alcohol and mandatory labeling of alcoholic beverages. During his last years as President, Yeltsin again attempted to create a national committee to secure a monopoly on alcoholic beverages. However, a severe economic crisis broke and this committee disbanded in 1999.

President Putin started his presidency with a sharp increase (about 40%) in excise taxes on alcohol in 2000. In 2001, Russian authorities began to create and revise laws to reduce illegal production,

ban juveniles from drinking alcohol in any public places, and forbid alcohol advertising and consumption on transport, in stadiums, and at other public events. In 2005 President Putin sharply criticized the system of alcohol control, calling the monitoring system extremely inefficient and corrupt. The following year a unified state automated information system for recording alcohol and spirits-containing products (EGAIS) was designed. This system assumed that all market participants would enter all information into a single database, and hence the turnover of illegal liquor would be impossible. But as a result of numerous failures associated with the introduction of the software, the implementation of EGAIS has been postponed.

From the beginning of his presidency, President Dmitry Medvedev admitted the country's "colossal drinking problem." In 2009, the Federal Service for Regulation of the Alcohol Market was created. It is a single body directly subordinate to the Russian Government that controls the production, turnover, quality, output and safety of ethyl alcohol and alcohol-containing products. It is responsible for the formulation and implementation of state alcohol policy and normative-legal regulation of alcohol. The Russian government aims to cut alcohol consumption by 72% over 10 years through price controls and a crackdown on illegal vodka. The proposal includes setting prices for alcohol based on the amount of ethanol, limiting alcohol retail sales by time and location, limiting alcohol ads, and banning events such as beer and wine festivals and contests (The concept of public policy 2009). In September 2009 President Medvedev

also proposed banning the sale of bottles and cans of low-alcohol beverages that are larger than 330 milliliters (11 ounces). At the beginning of 2010, the Russian government began to regulate vodka prices, banning stores from charging less than 89 rubles (\$3.07) for a half-liter bottle of vodka. Russia also tripled the excise tax on beer from three to nine rubles a liter. The law increases the tax to 10 rubles in 2011 and 12 rubles in 2012 (Regulation of alcohol market in Russia n.d.).

Even though similar measures have been effective in reducing alcohol consumption in many European countries, some doubt the feasibility and efficacy of the current anti-alcohol policy in Russia. As has been noted elsewhere, an anti-alcohol campaign is likely to be successful only when increased prices and reduced availability are accompanied by attempts to change the drinking culture and the motives for drinking (e.g., Partanen 1993). Some doubt the efficiency of the current anti-alcohol policy unless the state embarks on radical changes of the state anti-alcohol policy itself and prevails over the vague, inconsistent, and supply-side efforts of this policy (Zaigraev 2009).

Alcohol in Russia in comparative perspective

Relative to other Europeans, Russians overwhelmingly prefer vodka to wine or beer, binge drinking to moderate drinking, and exhibit high rates of alcohol dependency. Parents often pass the norms and traditions of alcohol drinking to the children, increasing their likelihood of alcohol dependence, and the initial pleasant feelings connected with alcohol intoxication increase their

chances to use it as self-medication, relief, and an escape from a bleak outlook on the future and severe disappointment with life (Zaigraev 2009, 79). There are strong Russian traditions and customs to drink “for the meeting,” “for health,” “for rest after death,” “for the wedding,” to celebrate a new purchase, a bonus, the receipt of one’s salary, the weekend, and so on. As alcohol, and especially vodka, became an indispensable part of people’s lives and culture, Russians considered every anti-alcohol campaign as a war of the state “against simple people” (officials always had unlimited access to alcohol) and showed a genius for brewing alcohol on their own.

While Russian levels of consumption and alcohol-related harm are exceptional relative to other European nations, some neighboring nations share similar patterns. The average rate of hard alcohol consumption is nine liters and above per person in Russia, Belarus, Ukraine, and the Baltic countries. Relative to other European nations, the difference in life expectancy between men and women is the widest in these countries, with a gap of nearly 13 years in Russia and 11 years in Lithuania (Podlazov 2010). Data on high rates of nonregistered alcohol (WHO 2004) and alcohol poisoning (Levchuk 2009; Stickle & Razvodovsky 2009) in these countries provide further proof of the similarities in alcohol consumption in these former Soviet states. However, in comparison to Russians, Ukrainians drink somewhat less recorded alcohol, but consume more unrecorded alcohol (WHO 2004), though alcohol-related problems appear to be somewhat lower in Ukraine relative to Russia when measured by the amount of alcohol

consumed and the consequences for population health (Levchuk 2009). Still, while these neighboring nations share similar alcohol-related problems, Russia stands out. The hazardous drinking pattern scores developed by Rehm and colleagues (2002), for example show that Russia and Belarus have the highest scores.

Conclusion

Alcohol-related harm is considered by many to be a national disaster in Russia. Following artificially low levels of consumption during the anti-alcohol campaign of the mid-1980s, drinking increased following the campaign, during and after the collapse of the Soviet Union in the early 1990s, and at periods during the last decade. In 2008, annual consumption was estimated to be nearly 18 liters of pure ethanol per person. Illegal alcohol and non-beverage alcohol surrogates, as well as home-produced alcohol, have made up a substantial proportion of overall consumption for the last 20 years. Russians prefer distilled spirits, mainly vodka, to wine and beer, and exhibit a pattern of heavy episodic binge drinking, both of which likely increase alcohol-related harm. The age at which Russians begin to consume alcohol has been decreasing and the proportion of women who drink alcohol has been increasing. There is a growing body of empirical evidence that reveals a strong association between heavy drinking and wide variety of harm in Russia, including family disruption, reduced economic productivity, alcohol dependence, alcoholic psychosis and poisoning, traffic accidents, assaults, criminal behavior, unintentional injury,

homicide, and suicide.

Among the proximal contributors to changes in consumption for the last 2–3 decades have been the end of the anti-alcohol campaign and the dissolution of the Soviet Union. The political, economic, social, and ideological changes following the latter all probably contributed to the demand for alcohol during this period. Market liberalization, a weak state, and political populism affected supply and affordability of vodka relative to most other products, so that from 1992 Russians started drinking more while eating less. Historical contributors to high rates of alcohol consumption in Russia might include a harsh climate that was hostile to farming and harvesting in most of the Russian territory, and the enormous profits reaped by the state by controlling alcohol sales. Some argue that Gorbachev's anti-alcohol campaign also contributed to recent high levels of hazardous drinking among the Russian population because it led to increased home production and large-scale distribution networks of illegal alcohol and alcohol surrogates.

All three presidents of Russia during the last two decades have tried to tackle the alcohol problem in the country. Yeltsin's multiple presidential decrees in 1990s did not bring any significant improvement. President Putin made several amendments and revisions to alcohol regulations and tried to introduce a unified state-run automated information system for recording alcohol and spirits-containing products, though the latter was unsuccessful. President Medvedev created the Federal Service for Regulation of the Alcohol Market, and in 2010 launched a new anti-alcohol

campaign aimed at lowering the annual rate of consumption to five liters of pure alcohol per person by 2020. Yet most doubt the feasibility of the current policy unless further responses address the deeply rooted drinking culture and the motives for alcohol consumption that date back centuries in Russia.

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