

Was the Mortality Decline in Russia Attributable to Alcohol Control Policy?

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Introduction

Since 2004, Russia has experienced steep decline in overall mortality, which was due mainly to decrease in mortality from cardiovascular diseases, external causes and alcohol-related deaths among working age population [1]. There was also a parallel downward trend in the population drinking, driven mainly by a decrease in vodka (spirit) consumption [2]. A coincidence in the alcohol consumption and mortality trends allows several experts to hypothesize that the reduction in the number of alcohol-related deaths during the last decade might be attributed to the implementation of the alcohol policy reforms in 2006, which increased government control over the alcohol market [1,2]. Recently, Pridemore and coauthors has reported findings that lend support to this hypothesis [3,4]. Using sophisticated analytical techniques (autoregressive integrated moving average interrupted time series analysis) they concluded that the implementation of alcohol policies was responsible for a decline in deaths due to alcohol poisoning, alcoholic cardiomyopathy, alcoholic liver cirrhosis, alcohol-related mental and behavioral disorders, as well as decrease in male traffic fatalities and suicides.

It also appears likely that the shift in the structure of consumption from vodka towards beer as a result of alcohol control measures have had a positive impact on bringing down the deaths rate in Russia during recent decade. Indeed, official sales statistics and data from population survey indicate that there have been favorable changes in the structure of alcohol consumption and drinking pattern [2]. It should be noted, that similar changes in the structure of alcohol consumption witnessed Northern European countries in the last decades of 20th century [5]. Furthermore, changes in the structure of alcohol consumption (substitution of vodka by beer) resulted in considerable improvement in alcohol-related mortality trends during the last decades in the former Soviet republics Ukraine, Belarus and Moldova [6].

Russian historical perspective provides evidence that decreasing in vodka affordability by rising taxes is an effective strategy for reducing alcohol-related harm [7]. In particular, using historical data from tsarist Russia Norstrom and Stickly [8] reported that changes in vodka taxes were significantly associated with alcohol consumption and alcohol-related mortality.

Most commentators agree that the affordability of vodka is one of the most important predictor of the dramatic fluctuations in Russian mortality during the last three decades [9]. In particular, the increase in heavy drinking in Russia during transition, which triggered the dramatic rise in alcohol-related mortality, resulted from an increase in the affordability of vodka. With price liberalization in 1992, vodka became much more affordable because of a sharp drop in the price of vodka relative to those of other goods and alcoholic beverages including beer [10]. By 1995, the real price of vodka fell to its lowest

point, after which point the real vodka price recovered until 1999, and then the affordability trend turned down again [10]. The relative fall in price for vodka explains an apparent paradox - an increase in alcohol consumption against a background of economic crisis. It is obvious therefore, that mortality crisis in the mid-1990s was to a great extent due to changed alcohol consumption structure, when 80% of all alcohol in Russia was consumed in the form of spirit [11]. A better regulation of the alcohol market that have resulted in a relative increase in prices for vodka compared to those for food products was a potential factor behind the decrease in vodka consumption and alcohol-related mortality rates between 1995 and 1998 [10]. The subsequent rise in vodka sale and alcohol-related mortality rates from 1998 may be associated with the increase in affordability of vodka [10]. The results from ecological regression suggest that lower vodka prices were associated with statistically significant increase in Russian total mortality in the 1990s [12]. It was also reported that in Russia vodka consumption is a better predictor of alcohol-related mortality rate than beer or wine consumption [11].

Making vodka less affordable through differential taxation was an essential element of the Russian alcohol policy in the most recent years. The national alcohol excise taxes rose 33 percent in 2013, the largest increase in modern Russian history, and a further 25 percent this year, pushing the lowest retail price for a half-liter bottle of vodka up to about 250 rubles (\$7). The Russian government has recently introduced a minimum retail price for a standard bottle of vodka, which climbed to 199 rubles (\$5.50) in 2014 from 125 rubles (\$3.50) in 2012. The negative outcome of these measures was that the rising price of vodka generated a demand for illegal alcohol. This point to the danger of using alcohol tax policy in the alcohol market, which is not fully controlled by the government.

In conclusion, the empirical and research evidence suggest that Russian government's attempt to curb the high alcohol-related mortality have been successful and provide additional evidence that pricing policy may be an effective strategy to reduce an alcohol-related burden. It is important to bear in mind, however, that one of the objections to pricing policy as a public health strategy is that consumers are likely to switch to surrogates in the face of licensed alcohol price increase. Indeed, most recent evidence from Russia suggests that the high price of legal vodka would increase illegal alcohol drinking. Therefore, any attempt to decrease of vodka affordability requires a degree of flexibility to tackle the problem of illegal alcohol.

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