

COMMENTARY

Mortality in Russian Penitentiaries and the General Population

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Russia has the world's second highest incarceration rate after the USA. These two countries have less than 7% of the world population, but they harbor approximately one-third of all prisoners (1). Although the issues of morbidity and mortality in its penitentiaries are of great consequence, there is little literature on prison health in Russia. The review of mortality and morbidity in Russian penitentiaries by Bobrik et al. fills this gap and produces a surprising conclusion: prisoners in Russia (who are mostly males) have a substantially lower risk of death than free-living Russian males.

Unlike most Western countries, during the past 15 years, Russia has experienced dramatic changes in mortality rates in the general population and among convicts. A steep increase in the number of prisoners after the break up of the Soviet Union was accompanied by an increase in the penitentiary death rates. The situation, however, turned around in 1998 and the incarceration rate started to decline (2). Bobrik *et al.* demonstrate a sustained decline since 1997 in deaths in Russian penitentiaries, with total mortality falling approximately three-fold.

Unfortunately, the temporal pattern of mortality in the general Russian population did not follow this trend (3). Mortality in the working age adult males increased dramatically in the early 1990s and remains extremely high. A decline in mortality between 1995 and 1998 was followed by a new increase after 1998. The temporal

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pattern closely followed the dynamics of alcohol sales (4). External causes of death and cardiovascular mortality are the main contributors to these elevated death rates.

The murder rate in Russia increased dramatically in the late 1980s and early 1990s. While fewer than 10,000 people per year were killed during the Gorbachev's anti-alcohol campaign (1985–1987), more than 30,000 were killed in 1994 and almost 30,000 in 2003. Sixty to seventy percent of all murders are linked to alcohol intoxication (5). At 22 per 100,000 person-years, Russia has one of the highest murder rates in the world, almost four-fold higher than the United States. The homicide death rate in working age Russian males in 2000 was 60.1/100,000 (6). For comparison, the homicide rate in the United States has declined between 1990 and 2000 from 10.0 per 100,000 to 6.0 per 100,000 (7), while the increase in the incarceration rate reflected harsh sentencing practices (8).

Suicide mortality in Russia dropped sharply during the anti-alcohol campaign of 1985–1987 but then increased steeply to an even higher level (9). Since 1992, the rate of suicide deaths in Russia has fluctuated between 35 and 42 per 100,000 (10). The rate of suicide deaths in working age males in 2000 was 87.6/100,000 (6). Russia currently has one of the highest suicide rates in the world.

The rate of death due to alcohol poisoning in Russia for 2000–2002 was also near 30/100,000, almost an order of magnitude higher than in the United States. More than 40,000 people per year die in Russia of alcohol poisoning, most of them working age males (4,10). Even the rate of traffic accident deaths in Russia is higher than in the United States, despite a much lower use of motor vehicles (10,11).

Cockerham has suggested that this increase in mortality in Russia was mainly due to lifestyle factors rather than poor health care (12). While almost all causes of death contributed to the increase in mortality among Russian men of active age, mortality from injuries (suicides, homicides, motor vehicle accidents, etc.) produced 32.8% of the decline in life expectancy in males from 1990 to 1994, while cardiovascular diseases contributed 33.4% (13). A steep increase in alcohol consumption in Russia after the end of Gorbachev's anti-alcohol campaign was probably the most important cause of this dramatic increase in potentially alcohol-related deaths (13,14), while poor nutrition – a high intake of fat – might be another explanation for a high rate of cardiovascular deaths (12,13).

Health-care system problems undoubtedly contributed to an increase in deaths due to infections and other preventable causes (15), despite immunization coverage in Russia being higher than in the United States (14). Russia has a substantially greater number of practicing physicians per 10,000 population than the United States (47.2 vs. 25.1 in 2000) (4) and access to health care and health services utilization in Russia remain among the best in the former Soviet Union (16).

Unlike Russia, in many Western countries death rates due to suicides are higher among prisoners than among free-living individuals. In Maryland, USA, in 1979–1987, the annual rate of deaths due to external causes among male state prisoners was 95 per 100,000 person-years, slightly lower than the age-adjusted rate of deaths due to external causes in free-living males in Maryland (Standardized Mortality Ratio SMR = 0.74) (17) but higher than the current rate of deaths due to external causes among Russian prisoners (49.9/100,000). Cardiovascular mortality in Maryland prisoners (59/100,000) was also lower than in free-living Maryland males (17) and much lower than in Russian prisoners in 2002 (104/100,000). Suicide deaths, on the contrary, were higher in Maryland prisoners (40/100,000) than free-living males (SMR = 1.84). In general, imprisonment was associated with a slightly reduced risk of death (SMR = 0.92).

Similarly, age-specific all-causes mortality rates were lower in New York City correctional facilities in 1971–1975 than in the general male population while suicide death rates were markedly elevated in prisoners. For example, for 35 to 44-year-old males, suicide rate was 194.4/100,000 in prisoners and 13.1/100,000 in free-living males (18). In France in 1977–1983, the total mortality in male prisoners was also lower than in free-living males, while suicide deaths were higher in prisoners (SMR = 3.13) (19).

The crude rates of deaths in male inmates in federal prisons in Ontario, Canada, in 1990–1998 were: 420.1/100,000 for all deaths, 205/100,000 for deaths due to external causes (poisoning, suicide and homicide), 102.7 for suicides, 40.5/100,000 for homicides, and 103/100,000 for cardiovascular deaths. Mortality in federal prisoners was higher than in free-living males (20).

Like Canada, Australia has a relatively low incarceration rate (139.2 per 100,000 population in 1998) (21). The crude death rate, however, in Australian penitentiaries in 1980–1998 was higher than in Russian penitentiaries in 2002 (437/100,000 vs. 327.8/100,000).

Suicides were the main cause of death (47.3% of all deaths), and suicides, homicides, and accidents combined accounted for 65.3% of all deaths in Australian prisons. The death rate due to these causes was 285/100,000, 5.7-fold higher than the total rate of death for all external causes in the Russian penitentiaries. The crude rate of deaths due to non-external causes in Australian prisons (152/100,000) was lower than in Russian prisons.

To summarize, Bobrik *et al.* have shown that the death rates due to external causes are surprisingly low in Russian penitentiaries. At the same time, death rates in free-living working age males in Russia are typically several times higher than in Western countries. External causes of death and cardiovascular deaths are the major contributors to this discrepancy.

Unfortunately, more cause-specific data on deaths among Russian prisoners, such as the rates for suicides and homicides, are not available. Suicide death rates in prisons in Western Countries tend to be higher than the rate of deaths due to all external causes among Russian prisoners (18,20,21). The reasons for relatively low rates of suicides and other violent deaths in Russian correctional institutions merit further investigation.

Long-term survival of former convicts in Russia should also be a topic of further study. While being behind bars in Russia has been associated with a reduced risk of death in 2002, there may be elevated mortality after a release from confinement. Studies in other countries have described elevated mortality in former convicts. The risk of death seems to be especially high immediately after release from a penitentiary – an overdose of drugs or alcohol being the most common cause of death (22). Longer term, death rates among former convicts also tend to be several-fold higher than in control populations (22–25). The risk of death due to overdose in 25 to 54-year-old individuals in France during the first year after their release from prisons was 274-fold higher than in the general population of the same age (26). As noted by Bobrik *et al.*, decreased tolerance of drugs and alcohol, and compassionate release of prisoners who are in failing health, may contribute to an elevated risk of death in Russian convicts after their release. Other reasons, such as return to self-destructive or hazardous lifestyles, and potential chronic adverse effects of imprisonment, may also contribute to a reduced long-term survival.

REFERENCES

1. Wamsley R. *World Prison Population List*, 5th edition. Findings 234. Research, Development and Statistics Directorate. Home Office: London; 2003.
2. Ministry of Justice of the Russian Federation. *Glavnoye Upravleniye Ispolneniya Nakazaniy GUIN* [Main Directorate for Execution of Punishments]. Available at <http://www/guin-uis.ru> [in Russian], accessed 6 December 2004.
3. Vishnevski AG, editor. *Population of Russia in 2002. Tenth Annual Demographic Report*. Center for Demography and Human Ecology: Moscow. 2004; (In Russian).
4. Notzon FC, Komarov YM, Ermakov SP, Savinykh AI, Hanson MB, Albertorio J. Vital and health statistics: Russian Federation and United States, selected years 1985–2000 with an overview of Russian mortality in the 1990s. *Vital Health Stat 5*. 2003;11:1–58.
5. [Osnovniye prichiny visokogo urovnia ubiystv — pianstvo i kriminalniye razborki] Demoscope Weekly, No. 135–136, 17–30 November 2003. Internet newspaper. Available at <http://demoscope.ru/weekly/2003/0135/barom03.php>, accessed 6 December 2004. (In Russian).
6. Data of the State Committee for Statistics abstracted from the Internet site of the Healthy Russia Foundation. (*Fond Zdorovaya Rossiya*). Available at www.healthyrussia.ru, accessed 26 August 2004. (In Russian.).
7. US Census Bureau. *Statistical Abstracts of the United States, 1995 and 2002, Section 2 Vital Statistics*. Available at <http://www.census.gov/prod/www/abs/statab.html>, accessed 6 December 2004.
8. Langan PA, Farrington DP. *Crime and Justice in the United States and in England and Wales, 1981–96*. US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics: Washington, DC; 1998.
9. Gilinski J, Roumiantseva G. Suicides in Russia. *Naseleniye i Obschestvo*. 1998; Vol. 25. Available at <http://www.demoscope.ru/acrobat/ps25.pdf>, accessed 6 December 2004. (In Russian.).
10. [Osnovnind prichinami smerti v Rossii ostayutsia bolezni systemi krovoobrascheniya i “vneshniye prichiny”] Demoscope Weekly, No. 151–152, 22 March – April 2004. Internet newspaper. Available at <http://demoscope.ru/weekly/2004/0151/barom02.php>, accessed 6 December 2004. (In Russian.).
11. Revich B, Reshetnikov K. Cause of Death: Motor Vehicle Accidents. *Naseleniye i Obschestvo*. 2000; Vol. 51. Available at <http://www.demoscope.ru/acrobat/ps51.pdf>, accessed 6 December 2004. (In Russian.).

12. Cockerham WC. The social determinants of the decline of life expectancy in Russia and eastern Europe: a lifestyle explanation. *J Health Soc Behav.* 1997;38(2):117-30.
13. Notzon FC, Komarov YM, Ermakov SP, Sempos CT, Marks JS, Sempos EV. Causes of declining life expectancy in Russia. *JAMA.* 1998;279(10):793-800.
14. Leon D, Shkolnikov V. Social stress and the Russian mortality crisis. Editorial. *JAMA.* 1998;279(10):790-1.
15. Andreev EM, Nolte E, Shkolnikov VM, Varavikova E, McKee M. The evolving pattern of avoidable mortality in Russia. *Int J Epidemiol.* 2003;32(3):437-46.
16. Balabanova D, McKee M, Pomerleau J, Rose R, Haerper C. Health service utilization in the former Soviet Union: evidence from eight countries. *Health Serv Res.* 2004;39(6 Part 2):1927-50.
17. Salive ME, Smith GS, Brewer TF. Death in prison: changing mortality patterns among male prisoners in Maryland, 1979-87. *Am J Public Health.* 1990;80(12):1479-80.
18. Novick LF, Remmlinger E. A study of 128 deaths in New York City correctional facilities (1971-76): implications for prisoner health care. *Med Care.* 1978;16(9):749-56.
19. Clavel F, Benhamou S, Flamant R. Decreased mortality among male prisoners. *Lancet.* 1987;2(8566):1012-4.
20. Wobeser WL, Datema J, Bechard B, Ford P. Causes of death among people in custody in Ontario, 1990-9. *Can Med Assoc J.* 2002;167(10):1109-13.
21. Dalton V. Death and dying in prison in Australia: national overview, 1980-98. *J Law Med Ethics.* 1999;27(3):269-74.
22. Bird SM, Hutchinson SJ. Male drugs-related deaths in the fortnight after release from prison: Scotland, 1996-99. *Addiction.* 2003;98(2):85-90.
23. Joukamaa M. The mortality of released Finnish prisoners; a 7 year follow-up study of the WATTU project. *Forensic Sci Int.* 1998;96(1):11-9.
24. Stewart LM, Henderson CJ, Hobbs MS, Ridout SC, Knuiman MW. Risk of death in prisoners after release from jail. *Aust N Z J Public Health.* 2004;28(1):32-6.
25. Singleton N, Pendry E, Taylor C, Farrell M, Marshden J. *Drug-Related Mortality Among Newly Released Offenders.* Social Survey Division, Office for national Statistics, National Addiction Center, Institute of Psychiatry UK Home Office Online Report 16/03. Available at <http://www.homeoffice.gov.uk/rds/pdfs2/rdsolr1603.pdf>, accessed 6 December 2004.
26. Verger P, Rotily M, Prudhomme J, Bird S. High mortality rates among inmates during the year following their discharge from a French prison. *J Forensic Sci.* 2003;48(3):614-6.