

## Comment

 Ukraine: not only a matter of geopolitics

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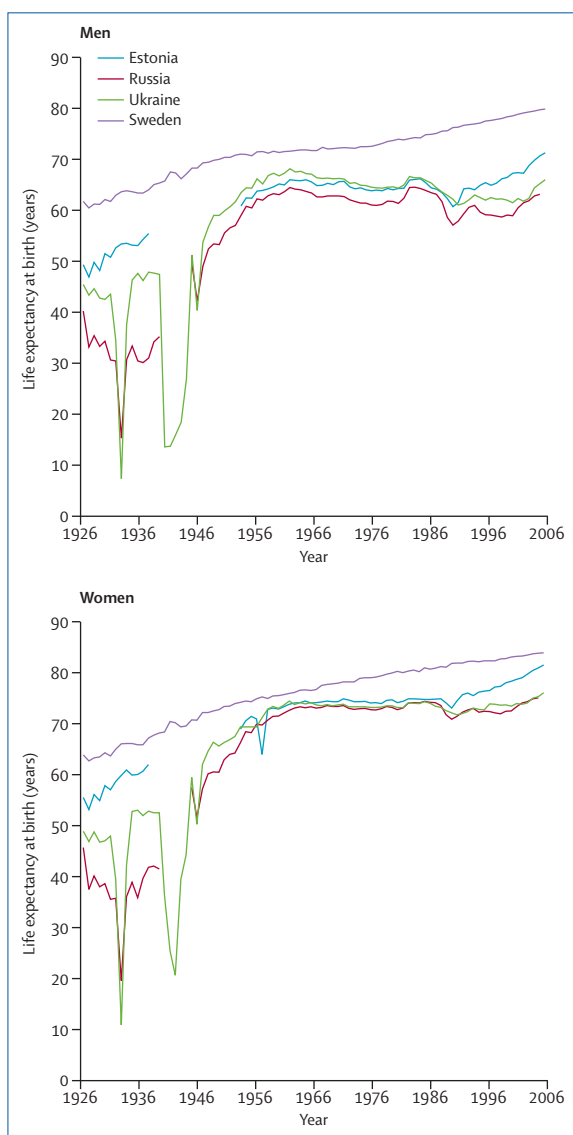
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Ukraine is once again at a political crossroads. Like many of the world's troubled nations, its present-day borders reflect historical events that paid little attention to the national identities of those involved, such as the westward expansion after World War 2 into what had been Polish territory, and Nikita Khrushchev's unexpected 1954 gift from Russia to Ukraine of Crimea. Just like Russia itself, which at different times has looked

to the east or west,<sup>1</sup> the people of Ukraine have struggled to come to terms with two different identities.<sup>2</sup> During the 20th century the geopolitical situation placed Ukraine firmly in the east, linked to Russia economically, culturally, and politically, but this century many Ukrainian people have turned their attention to the west. The outcome of this ongoing struggle will have profound effects on the health of the Ukrainian population.

This is evident when we look at the historical trajectory of Ukraine's population life expectancy, which has been more dramatic than that of any other European country (figure). In the 1930s, Stalin's forced collectivisation of agriculture led to severe food shortages, and life expectancy in Ukraine fell briefly to record lows of 7 years in men and 11 years in women. World War 2 and the Stalinist repression of the late 1940s caused further dramatic setbacks.<sup>3</sup> After the collapse of the Soviet Union in 1991, life expectancy in all its newly independent republics first followed a similar fluctuating course, but while life expectancy in Estonia and the other Baltic republics began to improve in the mid-1990s, Ukrainian and Russian life expectancy did not do so until 2005. The current gap in life expectancy between Ukraine and Sweden, which has one of Europe's highest life expectancies, is a staggering 14 years in men and 10 years in women.<sup>5</sup> High death rates, together with low birth rates, have caused a true demographic crisis: since the early 1990s, the Ukrainian population has shrunk from 52 to 46 million.<sup>5</sup>

High Ukrainian mortality undoubtedly has many causes, but these are ultimately driven by its unfavourable economic and political conditions. Interestingly, within Ukraine there is a clear east-west gradient, with western regions (mostly populated by Ukrainian-speakers) having lower mortality than eastern regions (mostly populated by Russian-speakers), suggesting that the Ukrainian health situation is largely determined by its position on a cultural fault-line between east and west.<sup>6</sup> Specific risk factors that have been shown to have a role in the Ukrainian health disadvantage include a high prevalence of smoking,<sup>7</sup> excessive alcohol consumption,<sup>8</sup> lack of access to good quality health care,<sup>9</sup> and low perceived control over the way one's life turns out.<sup>10</sup> These risk factors are at least partly due to Ukraine's desperate economic situation. After the collapse of the Soviet



**Figure:** Life expectancy in men and women at birth in Ukraine and selected other countries, 1926–2011

Data are from Meslé and Vallin,<sup>3</sup> the Human Life-table Database,<sup>4</sup> and WHO's Health for All Database.<sup>5</sup> Data for Estonia are missing between 1939 and 1952, and data for Russia are missing between 1941 and 1945.

Union, Ukraine's economy shrunk by half, with rates of absolute poverty rising to more than 30% at the end of the 1990s. After 2000, the economy started to recover, but was struck again by the 2008 recession, and currently Ukraine is one of the poorest European countries with an average income of only US\$3500.<sup>11</sup>

Economics, however, is not the whole story, because Ukrainian life expectancy is even lower than expected on the basis of its national income.<sup>12</sup> The country's low life expectancy also reflects political failure. During the past decades, former Communist countries that developed reasonably functioning democracies had earlier and stronger life expectancy growth than those that remained under partly autocratic rule, like Ukraine. After the first chaotic years were over, countries with a rapid and radical transition to democracy, such as the Czech Republic and Estonia, saw rapid decreases in mortality from conditions amenable to health policy, such as heart disease, cerebrovascular disease, and road traffic injury.<sup>13</sup> Such improvements in mortality probably reflect the wider policy changes that accompanied, and were promoted by, democratisation, including health-care reform, road traffic safety programmes, and health promotion campaigns.<sup>14</sup> Countries with more advanced democratic institutions are also likely to have less corruption,<sup>15</sup> which leads to inefficiencies in health care and undermines preventive health policies.<sup>16</sup>

In international ratings Ukraine's political system has been characterised as a "partial" democracy<sup>17</sup> and the country is perceived to be corrupt.<sup>18</sup> In a recent analysis that compared the performance of 43 European countries in ten areas of health policy, Ukraine was the worst performer of all, with bad ratings for all areas, ranging from tobacco control to perinatal care and from the detection and control of hypertension to cancer screening.<sup>19</sup> If Ukraine were to have the same low death rates as Sweden for causes of death amenable to health policy, more than half of its annual number of deaths (about 700 000) would not occur.<sup>20</sup>

The recipe for Ukrainian health recovery, therefore, is political change: a peaceful transition to full democracy, the building of effective institutions that promote the public good, and subsequent implementation of health and health-care policies tailored to the needs of the Ukrainian population. The outcome of the ongoing struggle will determine whether this will happen or not, and the European Union and other western

powers involved would do well to not only look at the geopolitical dimensions of the situation, but to also recognise its implications for population health. The new government in Kyiv faces many challenges, not least that it is running out of money and requires substantial funds from the European Union, the International Monetary Fund, and others to avoid imminent economic collapse.<sup>21</sup> Yet these organisations will demand conditions with any financial support they provide and, having been stringent in their imposition of austerity on countries facing economic problems within the European Union, they might be tempted to prescribe the same medicine for Ukraine. There was a failure to assess the health impact of such policies in Greece.<sup>22</sup> If the same miscalculation is made in a country with as many health challenges as Ukraine, the consequences could be many times worse. This time there will be no excuse.

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## Stockings before bandages: an option for venous ulcers

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In *The Lancet*, Rebecca Ashby and colleagues<sup>1</sup> report the results of a large pragmatic trial of a treatment for venous leg ulcers, in which they compare new two-layer compression hosiery with four-layer compression bandages, which are regarded as the standard care for venous leg ulcers. The investigators recorded no difference in the number of patients healed, and no difference in the trial's primary endpoint, median time to healing, between the two treatment groups—99 days (95% CI 84–126) with hosiery and 98 days (85–112) with compression bandages. Additionally, patients randomly allocated to hosiery had less ulcer recurrence, an improved quality of life, and reduced costs as compared with those in the bandage group. These findings have the potential to change clinical recommendations for care of venous leg ulcers, so we believe that further exploration of this topic and the study is worthwhile.

Venous leg ulcers are the most common cause of leg ulcers, affecting nearly 2% of elderly adults and

increasing in prevalence with advancing age.<sup>2,3</sup> Ulcers develop most frequently on patients' lower legs or ankles, and are associated with reduced quality of life and substantial health-care costs.<sup>4,5</sup> Although the exact pathophysiology of venous ulcers is not completely understood, ambulatory venous hypertension occurs most frequently as a result of abnormal obstruction or valvular dysfunction affecting the superficial, perforator, or deep veins.<sup>6</sup> Calf muscle pump dysfunction ensues, subsequently leading to venous hypertension, oedema, and ulcer formation.<sup>7,8</sup> Standard care with multi-layer compression wraps aims to reverse these changes, and data suggest that 12 weeks of treatment with infection control, primary dressings, and the application of high-strength (four-layer) compression successfully heals 30–75% of venous leg ulcers.<sup>9</sup>

In our experience, compression bandages are difficult to use, and are cumbersome, uncomfortable, and oppressive. Patients tell us that the bandages interrupt their lives by affecting their ability to socialise, by requiring them to change their bathing habits and the clothes and shoes they wear, and by forcing them to see clinicians on a regular basis for routine dressing changes. These bulky wraps are a failure of medical care in terms of their biomedical and industrial design. For a long time we have desired a better, more convenient way to prescribe compression treatment. However, truth be told, we have tempered concerns with the knowledge that reversal of the effects of sustained ambulatory venous pressure (also known as venous hypertension) and addressing the pathophysiological mechanisms in patients with venous insufficiency helps to heal patients' wounds. Moreover, we have suspected that the need for patients to return on a regular basis might have beneficial effects beyond the provision of high-quality compression by expert staff, such as



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