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Health in the Polish People's Republic[1]

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ABSTRACT

Before World War II (WWII) Poland was one of the countries with the poorest health in Europe. In the 1930s life expectancy in Poland was around 46 years in both sexes; in the same period in Germany it was over 61 years. Infant mortality was estimated at the level of 150 deaths per 1000 live births. The situation was exacerbated by WWII; between 1939 and 1945 life expectancy in Poland fell by 20-25 years.

The health transformation that took place in Poland after WWII proceeded very rapidly. Control of infectious diseases and infant mortality became a state priority in the post-war Polish People's Republic. The epidemiological transition that in the United Kingdom or Germany took almost a century, in Poland, and many other Central and East European (CEE) countries, occurred in the two decades following WWII. This process led the CEE region to almost closing the health gap dividing it from Western Europe in the 1960s. Life expectancy in Poland increased to 70 years and infant mortality decreased to 30 deaths per 1000 live births.

However, simultaneously, after WWII the seeds of the epidemic of man-made diseases were sown in CEE. In Poland the consumption of vodka and smoking prevalence reached some of the highest levels in Europe. This dramatic increase in exposure to lifestyle risk factors (an increase in cigarette sale from 20 billion cigarettes per annum after WWII to around 100 billion in the 1980s, and an increase of alcohol consumption from 3 litres per annum to nearly 9 litres in the same period), led Poland and the CEE region to a health catastrophe caused by the rise of chronic diseases. Diseases such as lung cancer, laryngeal and oral cavity cancers, cardiovascular diseases (e.g. ischaemic heart disease and stroke), sudden deaths from external causes (e.g. accidents, injuries, poisonings etc.), and liver cirrhosis, all reached in Poland some of the highest levels observed globally. In contrast to most Western democracies, authorities in communist states of CEE were unable to cope with these new health challenges, which demanded comprehensive, also non-medical solutions. Health literacy was low, also among the better educated segments of population, including the political class.

KEY WORDS: epidemiological transition, Semashko model, Poland, infectious diseases, infant mortality, premature mortality, chronic diseases.

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INTRODUCTION

Both the scale and the pace of improvement of human health in the 20th century are without historical precedent. Within a century life expectancy has doubled in many countries, increasing from 40 to 80 years. However, while in most countries of Western Europe this improvement has occurred in a harmonious and balanced fashion, population health in countries of Eastern Europe, including Poland, has been characterised by rapid fluctuations.

[1] In the present study the authors have used mortality statistics from the World Health Organization Mortality Database [1].

From the end of the 19th century, steep rises in life expectancy have been observed in the developed countries of Western Europe. Between 1870 and 1880 life expectancy in Germany amounted to 37 years, in France to 42 years, in England and Wales to 43 years, and in Sweden to 47 years. By the end of the 1920s it has increased to over 61 years in Germany, 57 years in France, 61 years in England and Wales, and over 64 years in Sweden. In Poland, however, life expectancy in this period remained low, with 1927 estimates being 46 years for both sexes. This backwardness had also been confirmed by high infant mortality rates, which during the interwar period were estimated to be over 150 deaths per 1,000 live births. Similarly, 40% of infants died before 5 years of age [2]. In comparison, in Sweden the infant mortality rates before 5 years of age were around 15% in 1920 [3, 4].

World War II (WWII) further exacerbated this problem. The war left Poland's infrastructure in ruins, and the poor pre-war levels of sanitation and hygiene became even worse. With famine raging in Poland, there were severe shortages of medicines and basic medical supplies, and epidemics of infectious diseases were breaking out. It is estimated that in the catastrophic years 1939-1945 life expectancy in Poland fell by 20-25 years[2] [5].

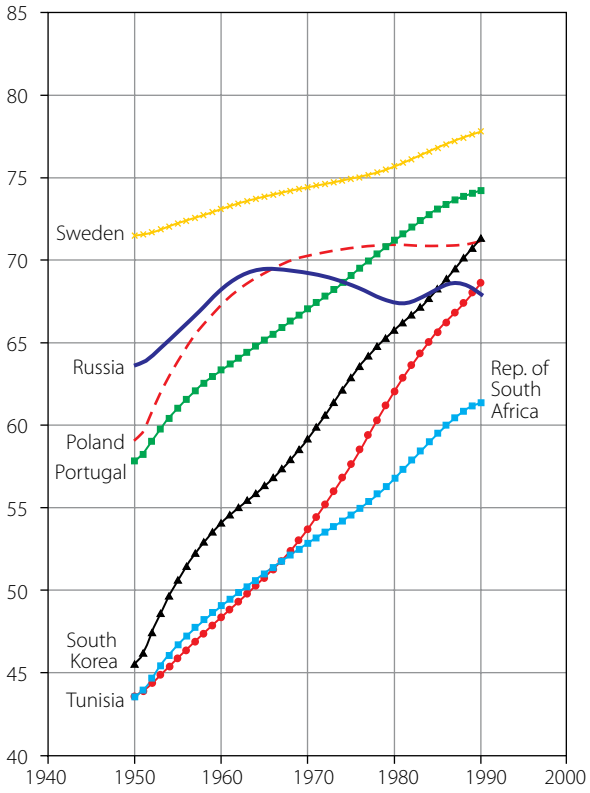


FIG. 1. Life expectancy at birth in selected countries, both sexes

In 1950, life expectancy in Poland was estimated at 56 years for men and 61 years for women. At the same time, life expectancy for both sexes amounted to 71 years in Sweden, 69 years in Great Britain, and 66 years in France. Infant mortality in Poland was estimated at around 110 deaths per 1,000 live births, and 33% of children died before the age of 5. In Sweden and England infant mortality was at a level of about 20 per 1,000 live births, and about 5% of babies died before the age of 5. The mortality of perinatal mothers in Poland was also high at 100 deaths per 100,000 births [3, 6].

One of the principal causes of mortality in Poland in the 1950s were infectious diseases. In 1959 mortality due to infectious and parasitic disease was nine times higher among Polish men (89/100,000) than among Swedish men (10/100,000) [2]. In contrast, chronic non-infectious conditions, such as cardiac failure and lung cancer (particularly pronounced in the UK and Finland) or liver cirrhosis, oesophageal and laryngeal cancer (pronounced in the Mediterranean countries), which became the predominant causes of death in Western countries after WWII, were much less prevalent in Poland[3] [7-9].

One of the most interesting accounts of the public health situation in Poland after WWII comes from a journalist, Aleksander Janta-Połczyński, who in 1948 reported from Poland for the Parisian émigré monthly *Kultura*. Poland emerges from his articles as a country characterised by widespread alcoholism and venereal disease, difficult conditions for medical treatment, tuberculosis, low resistance to infections, shortages of medical staff and medicines. He wrote that "If it weren't for the sulfa drugs and the dynamic activity of the Supreme Commission for Fighting Epidemics, Poland would face the threat of widespread infectious disease akin to the Middle Ages" [10].

HEALTH IMPROVEMENT IN THE 1950s AND 60s

In Poland, the epidemiological transition began in earnest only in the 1950s, almost a century later than in Sweden or the United Kingdom. At this starting point, health conditions in Poland were very poor and resembled those in 19th century Western Europe. The health improvement in Poland in the first decades after WWII proceeded at an impressive pace (Fig. 1) [4, 11].

Soviet domination over Eastern Europe after WWII influenced the development of new health policies throughout this region. The so-called "Universal Health System", or the Semashko model (named after the Minister of Health in Lenin's government), which had its origins in military medicine, was introduced in many socialist countries and led to fundamental changes in health policy, also in the newly formed Polish People's Republic (PRL)[4]. Its basic tenets were that every citizen

[2] There are no mortality statistics in Poland for the period between 1939 and 1945. Estimates can be based on the health situation in the Soviet Union, Czechoslovakia and Western European countries such as the United Kingdom and Luxembourg.
[3] In the early 1950s lung cancer was a major killer of middle-aged men in the UK.
[4] The Semashko model was adopted from the Soviet Union by all satellite countries of the so-called "Soviet bloc" after WWII.

should have access to free medical care, and the so-called "medicalisation of health"[5].

A vital ingredient of the Semashko model was the creation of an effective system for mother and child healthcare. A new scheme for the training of nurses, midwives, and paediatricians was established, and specialised paediatric departments were funded at medical schools[6]. This rapid post-war development of paediatrics was undoubtedly one of the most important reasons driving the improvements to child health in Poland [12]. Already in 1953, a Department of the Mother and Child was established at the Ministry of Health and Social Welfare. It coordinated the creation of a registry of maternal deaths, supported the development of perinatal medicine and a more effective communication system which would allow for the better use of existing human resources and infrastructure. The socialist system brought with it some undisputable social gains, like universal access to healthcare or free hospitalisation and paediatric care, all of which helped to improve maternal and infant health.

Dealing with infectious diseases was an even greater strategic priority of the Semashko model than paediatric care. The first post-war decades were characterized by the development of sanitary-epidemiological services in Poland. In order to control infectious diseases the State Sanitary Inspectorate was set up in 1954. Local sanitary-epidemiological stations were created and vaccination campaigns were rolled out, alongside educational campaigns raising awareness of the importance of vaccination and personal hygiene. Disinfectants and pest control chemicals also became widely available in this period [13].

These favourable developments were aptly summarised in a World Bank publication from 1996, which stated that "rates of infant mortality in the former socialist countries are lower than one would predict based on their income levels. This positive health development is mainly attributed to the higher education levels among women, the wide scope of prophylactic vaccinations among children (> 90%), and environmental hygiene in the former socialist countries" [14].

A good example of state involvement in public health under PRL was the struggle against tuberculosis [15]. After the war, the state took over all actions directed against this disease[7]. Already in 1945, a Tuberculosis Section of the State Health Board was established. In March 1948, the director of the Polish Anti-Tuberculosis Institute was appointed, and the Institute was allocated significant state funding. In 1951, by decree of the President of the Council of Ministers, an Institute of Tuberculosis was established as an independent research centre overseen to the Minister of Health. One of the aims of the Institute, as described in its statute, was to best utilise "the scientific achievements of pioneering Soviet science". In April 1955, by decree of the Minister of Health, compulsory and free of charge BCG vaccinations were introduced, and on 22 April 1959 the Polish Parliament passed the Anti-Tuberculosis Law. The conference abstract titles of the 10th Polish Anti-Tuberculosis Congress, held in September 1951, betray how politicised the subject of tuberculosis had become in Poland. They included, "The struggle against tuberculosis in the 6-year plan", or "Principles of dialectical materialism applied to the fight against tuberculosis".

Another spectacular symbol of PRL's authorities' commitment to fighting infectious diseases was Poland's pioneering role in the fight against polio (also known as Heine-Medin disease). In the 1950s every year thousands of children in Poland got the disease. Towards the end of the 1950s Hilary Koprowski, a Polish virologist working in the USA, and the creator of the first polio vaccine, secured 9 million doses of the vaccine for Poland. Despite coming from Wyeth, an American company, the gift was accepted by the communist authorities. In autumn 1959, under the leadership of Feliks Przesmycki, the director of the National Institute of Hygiene (PZH) in Warsaw, Poland became one of the first countries in the world to launch a mass vaccination campaign against polio. As a result polio morbidity fell to just a few dozen cases per annum at beginning of the 1960s [16].

As a result of those changes infant and child mortality rates in Poland rapidly declined (Fig. 2). Newborn mortality rates were halved within a decade, from 109/1000 live births in 1950 to 55/1000 in 1960. By 1970 the newborn mortality rates amounted to around 30/1000 live births. At this time, the corresponding newborn mortality rates for the Federal Republic of Germany (West Germany) were 23/1000 live births, Austria – 26, Italy – 29, and Portugal – 53. Furthermore, the likelihood of child mortality before the age of 5 in Poland decreased to 7% from 33% in 1950. Thus, 25 years after the end of WWII the survival of infants and young children in Poland had achieved a satisfactory European level. At the same time, maternal mortality had dropped to 30/100,000 live births in 1970. Mortality from infectious diseases was also decreasing at an extraordinary rate e.g. for men it declined from 99/100,000 in 1963, to 65/100,000 in 1970, and to about 20/100,000 in 1985 [4].

[5] In Poland the term medicalisation is often positively perceived as providing easier access to medical care, hospitals and medicines. In some Western countries, however, a debate over the negative influence of over-medicalisation on society has been going on since the 1960s.

[6] The importance of health within the political doctrine of the Polish state was underlined by the establishment of separate and autonomous higher education institutions dealing with health.

[7] Until 1948, medical treatment of tuberculosis had been of no avail. Only by introducing streptomycin was it possible to effectively treat this disease for which incidence rates had significantly increased during WWII and afterwards, as a result of harsh living conditions and overcrowded housing. After the war, the large scale battle against tuberculosis was organised and undertaken by the Institute of Tuberculosis, and in the following years has helped to significantly reduce tuberculosis morbidity rates.

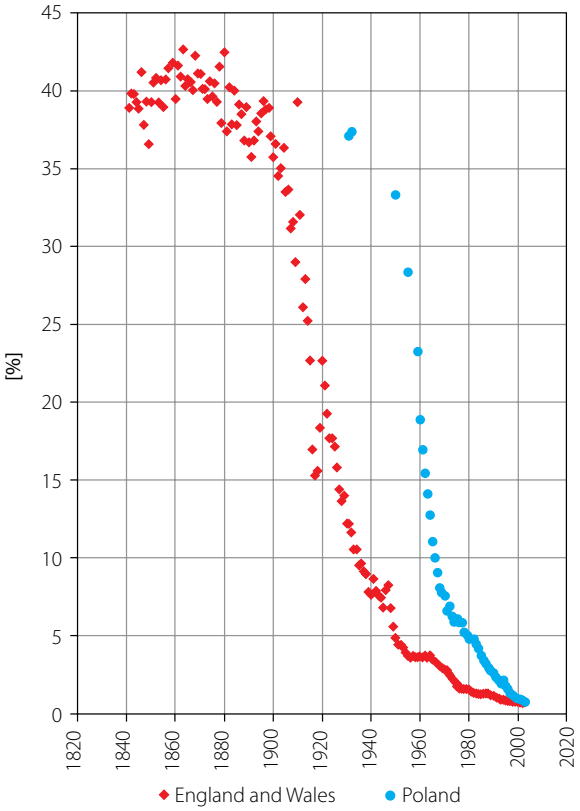


FIG. 2. Percentage of deaths before the age of 5, Poland and England and Wales

All these favourable health developments led to a rapid increase of life expectancy rates in Poland in both sexes. In the 1950s, life expectancy in Poland increased by almost 9 years, whereas it only increased by 2.5 years in West Germany over the same period (Fig. 3). Indeed at the end of the 1960s, there was only 1 to 2 years difference in life expectancy at birth for both sexes between Poland and developed market economy countries of Western Europe (in Poland life expectancy was 70 years whilst in England and Wales 72 years, and in West Germany 71 years). The health gap between Poland and Western Europe was almost closed [17].

THE HEALTH COLLAPSE SINCE THE LATE 1960s

Regrettably, this period of health improvement was accompanied by many developments, which in the next decades were to reverse this positive pattern. While in western countries population health continued to improve, Poland between the end of the 1960s and the end of the 1980s experienced an extremely rare occurrence in a period of peacetime – a decrease in the life expectancy of adult males, and a stagnation in the health of adult women.

At the heart of this health collapse lay the same philosophy that had previously helped reduce infant mortality and infectious disease in Poland, namely the complete medicalisation of health resulting from the Semashko model. The state, and not the citizen, was perceived as being responsible for one's health – as a result the Poles did not develop crucial health competencies and remained in a state of health illiteracy. Every disease or disease group had its own respective institute. Health governance was dominated by doctors, who held all the directorial positions at the Ministry of Health. In contrast to Western Europe, the concept of preventive med-

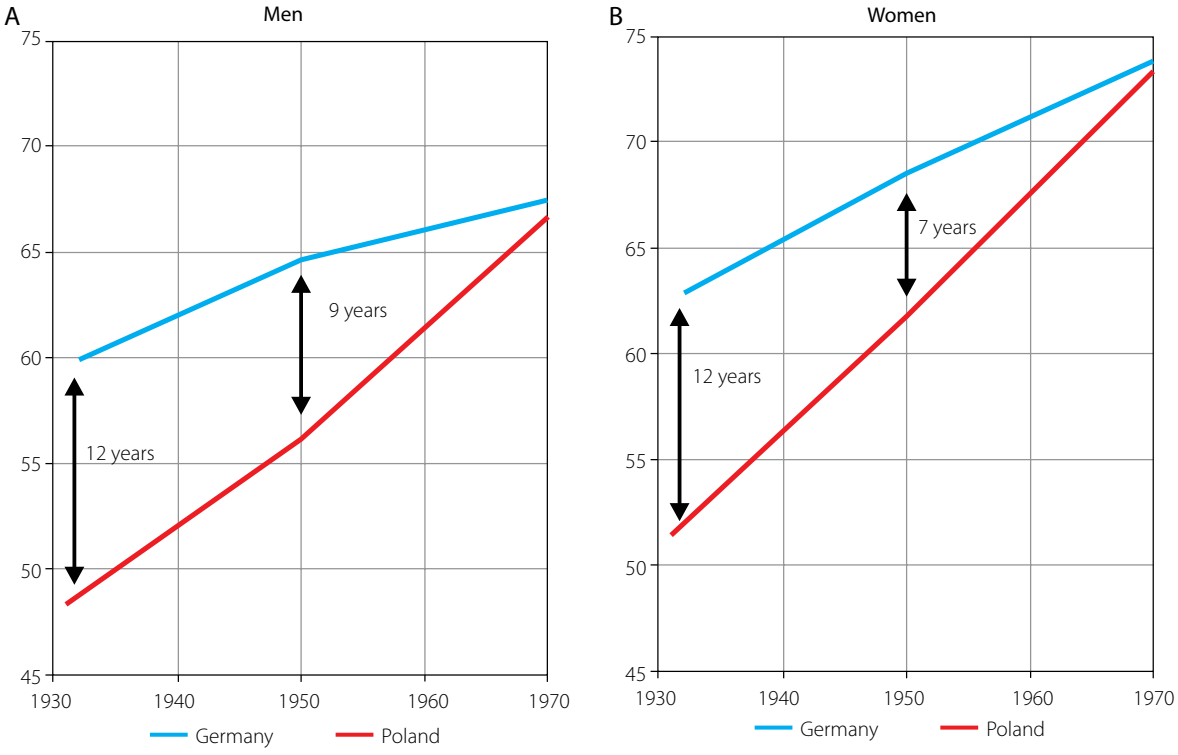


FIG. 3. Life expectancy at birth in Poland and Germany, 1930-1970

icine was not based on a multidisciplinary approach to health in all policy, but only on strictly medical solutions. Preventive medicine had been fully integrated with curative medicine, to which it was completely subordinated. Public health was defined as social medicine, and was seen as the remit of medical doctors [4, 18].

Epidemiology, the fundamental science of public health, focused almost exclusively on infectious diseases. Unlike the USA or the UK, the epidemiology of chronic non-communicable diseases was poorly developed; lagging 15-20 years behind English-speaking countries and Scandinavia. In the absence of epidemiological information and perspective, Poland, similarly to other countries of Eastern Europe, did not take on board new developments in public health, such as identifying risk factors impacting particular sections of the population, in which mortality rates had risen. This situation was thus not conducive to the dissemination of relevant health information and expertise, nor to the mobilisation of adequate means for the appropriate public health response. Medical doctors developed the tendency to focus on individual patient care, based on their experience with the successful campaign to contain infectious diseases. Primary prevention was considered from a medical standpoint, and was focused principally on routine patient check-ups. Health policy prioritised actions which aimed to continue increasing the number of doctors, polyclinics and hospital beds. An inordinately large clinical sector, combined with passive curative medicine strategies and long hospital stays, was unable to keep up with technological progress and devoured a large part of the already limited funds earmarked for healthcare [4].

The rapid development of evidence-based medicine (EBM) which took place in the West in the 1960s and 1970s, was accompanied by research into the causes of chronic non-communicable diseases, such as studies on the causal relationship between smoking and lung cancer [19], the relationship between diet and cardiovascular disease [20], or, as in the case of alcohol, between the consumption of alcohol and liver cirrhosis or injury. However, this went by unnoticed in Poland. There were no open public debates nor, except in the case of a few infectious diseases, any large-scale public health interventions involving the state or society.

In contrast to many western countries, medicine in Poland was more commonly defined as an art, the success of which depends on the doctor's skill, rather than a science, whose methods should be based upon evidence. Meanwhile, in countries such as the UK, large-scale clinical studies had become a standard method for defining the efficacy of drugs and medical technologies. The growing importance of EBM manifested itself in the use of experimental and observational studies as a basis for clinical practice. This ensured that medical doctors had access to knowledge derived from systematic scientific studies[8] [21]. These advances had been largely ignored in Poland and had little effect on broadly defined clinical practice.

The development of health cultures and perceptions also took different paths. In the West, the advent of large-scale health campaigns, and health interventions based on the results of scientific studies, allowed to build the popular awareness that people themselves can influence and improve their own health (e.g. through physical exercise or following the recommendations of so-called "preventive medicine"). This stood in stark contrast with the Soviet bloc, where health was defined primarily as the business of the state and government.

The concept of "health fields", developed by Lalonde in Canada in the 1970s, and subsequently modified and defined in several documents[9] was difficult to find in Polish health policy, where it was not the whole government, but only the Health Minister who was responsible for health. This stood in contrast to, for instance, the Scandinavian countries [22]. There were no multi-disciplinary schools of public health (i.e. epidemiology, biostatistics, disease prevention, healthcare organisation, environmental health, health education and health promotion). The public health field lacked representatives of any professions other than medical doctors: hospital administrators, health science lecturers, nutritionists, biostatisticians, social scientists, epidemiologists, lawyers, etc.

As a result, the health awareness of Poles, as in the other countries of the Soviet bloc, remained very low. After WWII, tobacco and alcohol consumption in Eastern Europe grew steadily (Fig. 4). Both these products were readily available and their prices were maintained

[8] After WWII, Austin B. Hill, a professor of applied medical statistics at the London School of Hygiene and Tropical Medicine, developed methodologies for assessing and evaluating new treatments and medical interventions. He pointed out the need for making appropriate comparisons in modern epidemiology, which would allow to avoid bias and to understand the role of probability (i.e. role of chance). He designed and conducted some of the first randomised, double-blind clinical trials, which were designed in a way which would minimise investigator bias. This method was first used to test the effectiveness of treating tuberculosis with streptomycin. Hill divided his tuberculosis patients into two groups; neither the physician (researcher), nor the patient (subject) knew whether they are receiving placebo or streptomycin (hence the term "double-blind study"). In this way a new methodology arose for measuring efficacy of treatment and the effectiveness of other medical interventions. Elements of this reasoning were then used to study the relationship between smoking and lung cancer. Research designs such as the case control study, and the prospective and retrospective cohort studies, were created, and were used in research on the role of smoking in causing lung cancer. The key moment when EBM became established in Western medical thinking was the 1972 publication by Archie Cochrane entitled "Effectiveness and Efficiency: Random Reflections on Health Services", which criticized the dearth of clinical experiments as the basis for medical practice.

[9] Published in 1974 by the Canadian Government, the Lalonde report was an influential symbol of the Western countries' departure from the medicalisation of health model. It proposed a holistic approach to building population health, through focusing of four key "health fields" – people's lifestyle, their living environment, biology and genetics, and healthcare organisation (M. Lalonde, A new perspective on the health of Canadians; a working document, Ottawa, 1974).

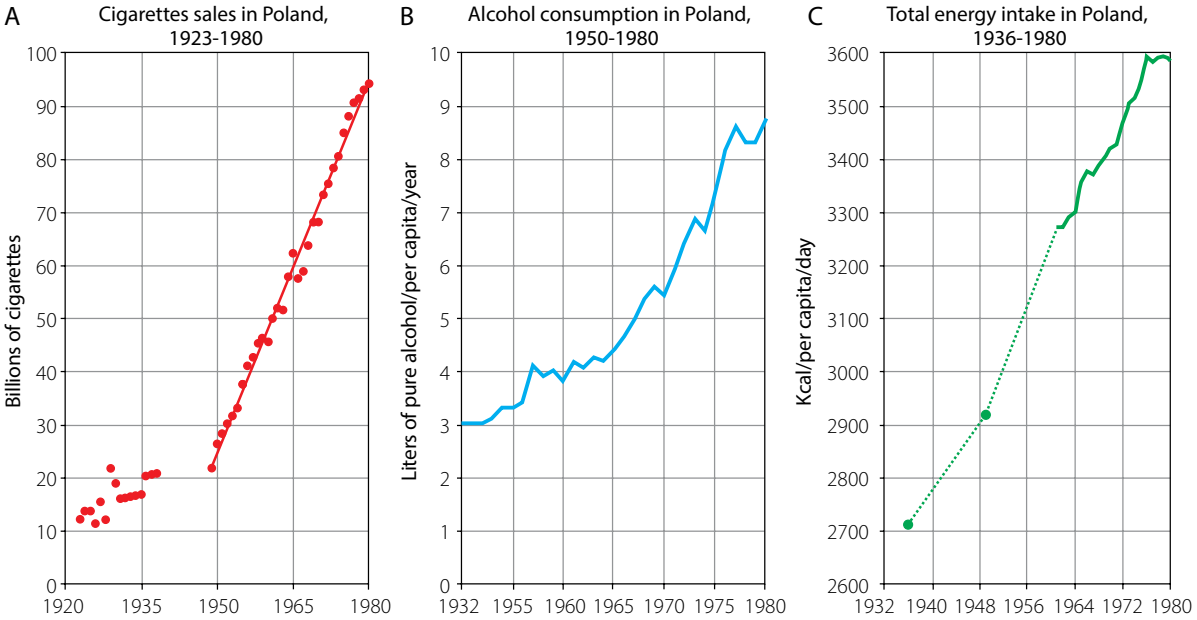


FIG. 4. Cigarette sale, alcohol consumption, and caloric intake in Poland

at very low levels. In Poland, alcohol consumption per capita increased from about 3 litres in 1950 to 8.4 litres in 1980, and the dominant fashion of drinking became the "Russian" model of binge drinking. Another good example of a lack of strong health policy was the state's dismissive attitude towards tobacco. Within the militarised societies of Eastern Europe, cigarette production and sale became a national priority. Everyone in the army received a cigarette allocation regardless of whether they smoked or not, and non-smoking among soldiers was frowned upon. Cigarette prices were low, and cigarettes were widely available. Indeed, smoking was allowed practically everywhere and at all times, except in places where fire safety could be compromised. Cigarette sale increased from 20 billion cigarettes per annum to around 100 billion in 1980. This state of affairs changed very little until the end of the 1980s (Fig. 4).

Poland, and the other closed societies of the Soviet bloc, were deprived of information about the harmful effects of smoking. Paradoxically, the heaviest smokers were the better educated (including physicians) and the better-off. Such approaches to smoking, observed in the countries of communist Eastern Europe, meant that Poland became one of the global leaders in tobacco consumption between the late 1970s and the end of the 20th century [4, 23, 24].

Another important factor that can help account for Poland's health disaster was diet. The state heavily subsidised certain basic foodstuffs. This meant that the prices of meat and dairy products remained relatively low compared to people's incomes. This, combined with a lack of awareness about the adverse effects of certain diets on the cardiovascular system, led to a high consumption of saturated animal fats. Up until 1980, caloric intakes were higher in Eastern Europe than in Western Europe (Fig. 4). This was likely the reason that the onset of obesity became a problem first in Eastern European countries. A lack of diversity and innovation in eating habits meant that in the northern part of Eastern Europe vegetable oil consumption remained at very low levels, probably contributing to the deficiency of certain essential unsaturated fatty acids [4, 25].

Although high seasonal consumption of fruits and vegetables from local markets was noted in many Soviet bloc countries, such produce was practically unavailable out of season; in contrast to Western Europe (including its northern region). The low consumption of fresh fruits and vegetables out of season was coupled with a reliance on traditional methods of preparing food. This was connected with a high salt intake (15-20 g day) [26], which in itself carried the risk of cardiovascular disease. Many vegetables were consumed in marinated form, and meats were usually processed with large amounts of salt, potassium nitrate (saltpetre), or were smoked (mainly sausages).

Meanwhile, in Western Europe in the 1960s and 1970s a new public health philosophy was being developed. Health policy was to be carried out by the entire state apparatus – and with a significant role of the Ministry of Finance – and not just by the Ministry of Health. The so-called "Health in All Policies" approach was successfully carried out by countries such as Finland, which underwent the transformation from a country with poor health indicators in the 1960s, to a European leader in health [22]. Another example was the UK, a world power in the trade, sale and consumption of tobacco (in the late 1940s 80% of adult males in Britain smoked, and lung cancer became the number 1 killer of middle-aged men). The British initiated an anti-smoking crusade using all

possible means; with economic and educational measures being paramount. For example, huge taxes were set on tobacco products, and until now the UK is the country where cigarette prices are among the highest in Europe (four times higher than in Poland). This helped to reverse the trend of lung cancer incidence, which decreased threefold. British scientists estimate that the declining smoking prevalence rates are also responsible in 50% for the decrease in the incidence of cardiovascular diseases in the UK [27]. The unprecedented health growth in western European democracies (which is continuing in the 21st century) has been possible thanks to changing the way their citizens think about health (not just as a matter of curative medicine), building their health competencies and reducing health illiteracy, building healthy lifestyle models, and the active participation of state and society in public health programs ("health is too important to be left to doctors") [28].

Despite the low mortality rates from chronic disease in post-WWII Poland, followed initially by only modest increases (keeping in mind the long period of disease development in the case of many chronic diseases), already around the mid-1960s increases in mortality began to be observed, particularly in the group of young and middle-aged men. Among adult women (aged 20-64), mortality rates were stagnant. As a result, at the same time as a rapid improvement was occurring in the control of infectious diseases and child health, an equally rapid deterioration of adult health could be observed. Life expectancy at 20 years of age was decreasing (Fig. 5). Myocardial infarction sharply rose. Lung cancer rates soared for men, breaking world records, especially in young and middle-aged adults. Morbidity rates of liver cirrhosis also rose. Almost one in five adult men suffered premature death from injury (Fig. 6).

This deterioration in population health in Poland was not a result of any shortage of doctors or hospitals. In fact, this dramatic decrease in health occurred at the same time as the number of doctors in Eastern Europe significantly increased (in 1990 the number of doctors per 1000 inhabitants in Eastern Europe was 4.7, while in market economy countries it was just 2.5), and their level of education was improving. Similarly, the number of hospital beds increased (in 1990 there were 11 hospital beds per 1000 inhabitants in Eastern Europe, versus just 8 beds per 1000 inhabitants in developed countries). Access to new drugs and medical technologies also continued to improve in Eastern Europe [17].

While mortality rates in the UK and Finland have decreased by over 30% between 1965 and 1990, in Poland they have increased by almost 40%. Life expectancy among males at age 20 decreased by 2.3 years, and in women it increased by just 1.1 years. During this same time, life expectancy at age 20 in western countries such as France and Finland had increased by more than 4 years in men and more than 5 years for women.

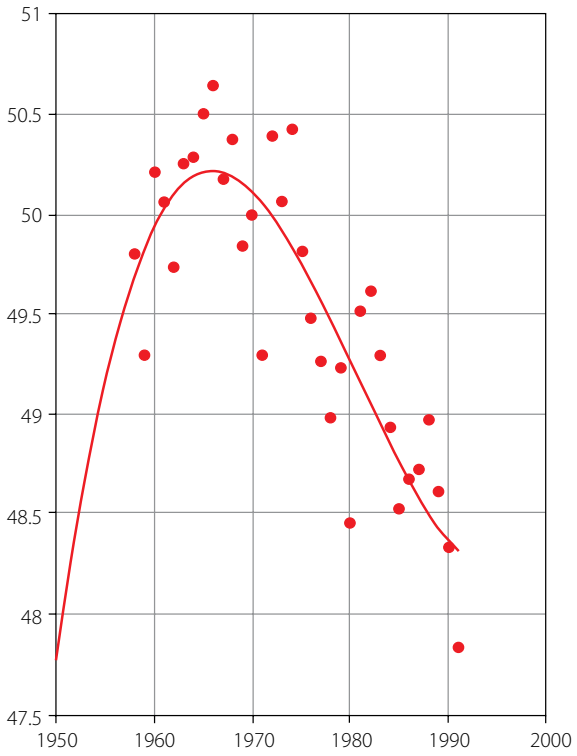


FIG. 5. Life expectancy at age 20, Poland, men

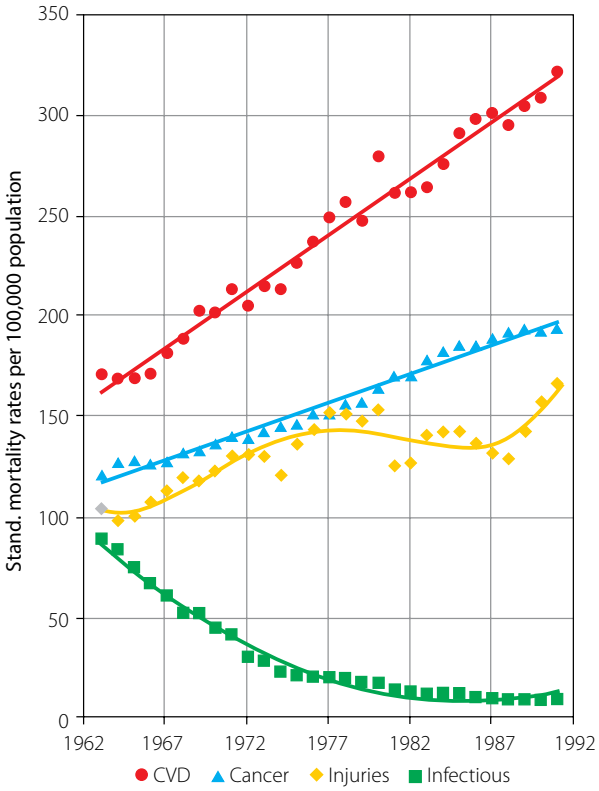
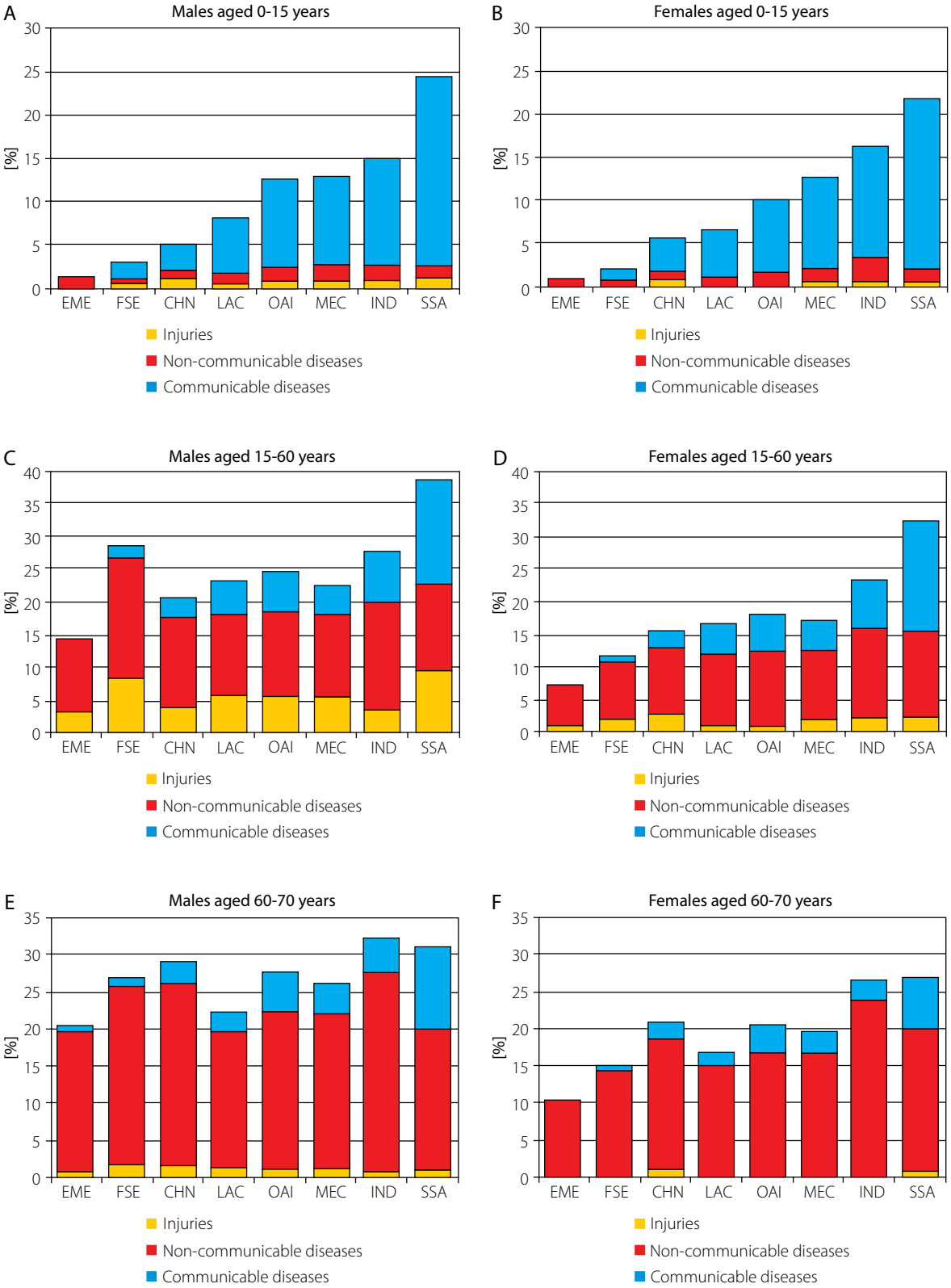


FIG. 6. Mortality of men aged 20-64, selected causes, Poland 1963-1991



EME – Established Market Economies; FSE – Former Socialist Economies; CHN – China; LAC – Latin America and the Caribbean; OAI – Other Asia and Islands; MEC – Middle Eastern Crescent; IND – India; SSA – Sub-Saharan Africa.

FIG. 7. Risk of dying by world region, 1990

The main reason for this growing gap in health, especially for young and middle-aged men, were cardiovascular disease, especially coronary heart disease. The increase in cardiovascular disease mortality for men aged 20-64 in the years 1965-1990 in Poland amounted to 83%, while in the same period in Belgium or Finland a decrease of around 50% was observed. The second principal reason for the growing East-West gap was an increase in mortality due to sudden external causes. This rate grew by 57% among Poles aged 20-64, while it decreased by 25% in Austria, and 37% in the Netherlands [4].

Until the 1980s, cancer mortality in Poland was lower than in Western Europe. However, while in the 1980s Western Europe experienced for the first time a downward trend in cancer mortality, in Poland this rapidly grew. This was primarily due to lung cancer incidence, as well as other tobacco-related cancer locations [4].

Another health development typifying this period in Poland, as well as other countries of the Soviet bloc, were the growing differences in health between men and women; the so-called "excess male mortality". This was particularly pronounced in the 20-64 age group. The difference in life expectancy between men and women increased throughout the period of PRL. In 1960 the gap was 6 years, at a life expectancy of 71 years for women and 65 for men. When the communist regime was collapsing in 1989, life expectancy was almost 9 years higher for women, at a level of 75 years, compared to just 66 years for men [29].

Before the economic and political transformations of the 1990s, the health status of adults in Poland, and in the rest of the Soviet bloc, differed dramatically from the western countries [4, 30].

CONCLUDING REMARKS

The untrammelled rise of adult premature mortality in Poland has demonstrated the inability of communist countries to effectively respond to the new health challenges. Chronic diseases among adults were becoming an ever greater burden for the economy. Human capital was wasted and economic development retarded. These failures in public health were part of a larger pattern of Poland's inability to compete effectively in the globalising economy.

At the end of the 1980s the health of adult Poles was in a catastrophic state. Premature mortality among middle-aged Poles, lung cancer mortality, cardiovascular diseases, sudden deaths from external causes (i.e. accidents, injuries, poisonings, etc.), and liver cirrhosis, had achieved in Poland (and other CEE countries) levels that were not observed anywhere else in the world. This epidemic of "man-made diseases" became one of the main challenges facing Poland at the end of the PRL period. According to WHO estimates in 1990, the chances of a 15-year-old boy in Poland (along with his peers in other former socialist countries) to survive to 60 years of age was lower than that of a teenager living in China, Latin America, or India[10] (Fig. 7).

As the PRL was collapsing in 1989, the predictions for the future of the country were dire. The uncertainty about what the collapse of socialist economy will bring, the impoverishment of society, the return of unemployment (inexistent under communism) – all of this augured very poorly for the health of Poles. Forecasts indicated that infant and child mortality rates will increase. The tobacco industry predicted further increases in cigarette sales. Poland's looming food shortage and malnutrition crisis were widely debated[11].

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DISCLOSURE

Authors report no conflict of interest.

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