

PART I. DISEASES AND PROBLEMS DISTINGUISHED BY WHO AND FAO
DZIAŁ I. CHOROBY I PROBLEMY WYRÓŻNIONE PRZEZ WHO I FAO

**POLAND'S RAPID LUNG CANCER DECLINE IN THE YEARS 1990-2016.
THE FIRST STEP TOWARDS THE ERADICATION OF LUNG CANCER IN POLAND**

**GWAŁTOWNY SPADEK ZACHOROWAŃ I ZGONÓW Z POWODU RAKA PŁUCA
W POLSCE W LATACH 1990-2016.
PIERWSZY KROK DO ERADYKACJI RAKA PŁUCA W POLSCE**

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Summary

In the late 1980s, Poland was one of the countries with the highest per capita cigarette consumption, smoking prevalence, and lung cancer morbidity and mortality in Europe. After the political and economic transformation of 1989, transnational tobacco companies (TTCs) entered the market. The TTCs expected the cigarette sales in Poland to increase by at least 10% in the 1990s. Unexpectedly, the opposite happened. In the 1990s, the social attitudes towards smoking began to change, spurred by the involvement of civil society, the medical community, religious institutions, as well as national and local administration in developing and conducting a comprehensive tobacco control programme. For the first time since World War II, cigarette consumption in Poland began to decline. As a report by Fagerstrom et al. published in 2001 in a renowned medical journal showed by the end of the 1990s Poland had one of the best anti-smoking climates in Europe. Between 1990 and 2015 tobacco sales in the country fell from 100bn cigarettes to 40bn. This was accompanied by a decrease in lung cancer incidence and mortality. This paper discusses the factors underlying these positive developments.

Keywords: democracy, civil society, public health, tobacco smoking, eradication (partial) of lung cancer

Streszczenie

Pod koniec lat 80. ubiegłego wieku Polska była krajem najwyższej konsumpcji papierosów, częstości palenia i zachorowalności i umieralności z powodu raka płuca w Europie. Nieoczekiwanie, po politycznej i ekonomicznej transformacji lat 90., trend ten został odwrócony. Po raz pierwszy w historii doszło nie tylko do zahamowania wzrostu sprzedaży tytoniu, ale sprzedaż papierosów zaczęła spadać. Międzynarodowe koncerny tytoniowe, które niezwykle szybko sprywatyzowały i opanowały rynek tytoniowy w Polsce, planowały wzrost sprzedaży papierosów w latach 90. o 10%. W 2000 roku, w porównaniu z 1990 rokiem, sprzedaż papierosów zmniejszyła się o 10 miliardów sztuk rocznie. Rozpoczął się trwający do chwili obecnej stały harmonijny spadek konsumpcji tytoniu. W dość krótkim czasie doszło do diametralnej zmiany klimatu wobec papierosów. W opublikowanym w 2001 roku w renomowanym czasopiśmie medycznym doniesieniu naukowym, autorzy wykazali (Fagerstrom K. i inni), że w Polsce i w Szwecji istnieje najlepszy klimat antytytoniowy w Europie. Społeczeństwo obywatelskie, społeczność medyczna i administracja państwowa przygotowały i wdrożyły do praktyki wielowymiarowy program ograniczenia zdrowotnych następstw palenia tytoniu. Program ten w ciągu 25 lat doprowadził do gwałtownego spadku palenia papierosów, co w rezultacie doprowadziło do niesłychanego zmniejszenia się zachorowalności i umieralności z powodu raka płuca palaczy. Przedstawiona publikacja omawia czynniki, które doprowadziły do tych zmian.

Słowa kluczowe: demokracja, społeczeństwo obywatelskie, zdrowie publiczne, palenie tytoniu, eradykacja raka płuca

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Historical background – Health challenges in Poland after World War II¹

One of the main challenges of the newly established communist Polish People's Republic after World War II was the catastrophic health state of its population. Fifteen percent of newborns did not survive the first year of life, and life expectancy stood at about 50 years [2]. This was largely due to the high rates of infectious diseases in the war-torn country. Overcoming this challenge became the priority of the state. Poland's health policy was geared towards the eradication of infectious diseases. A centralised health system was introduced, where infectious diseases and the health of children and women became priorities, in line with the Soviet Semashko model.² All these changes brought about a rapid improvement in population health. Epidemics of tuberculosis and other infectious diseases, including childhood diseases, were brought under control. Infant mortality declined from 109 deaths per 1000 births in 1950 just drop to 30 per 1000 in 1970. Between 1950 and 1960 life expectancy increased almost by 9 years. By 1960, public health indicators in Poland came close to those in Western Europe: the average life expectancy in Britain was 72 and in Poland 71 [2].

However, at the same time, tobacco and alcohol consumption levels in Poland saw a rapid, linear increase [4]. Throughout the period of communist rule, these products maintained the position of strategic commodities for the state-owned economy³. Annual tobacco consumption increased from about 20 billion cigarettes before World War II to approximately 100 billion in the 1980s, making Poland one of the countries with the highest cigarette consumption in Europe (Fig. 1).

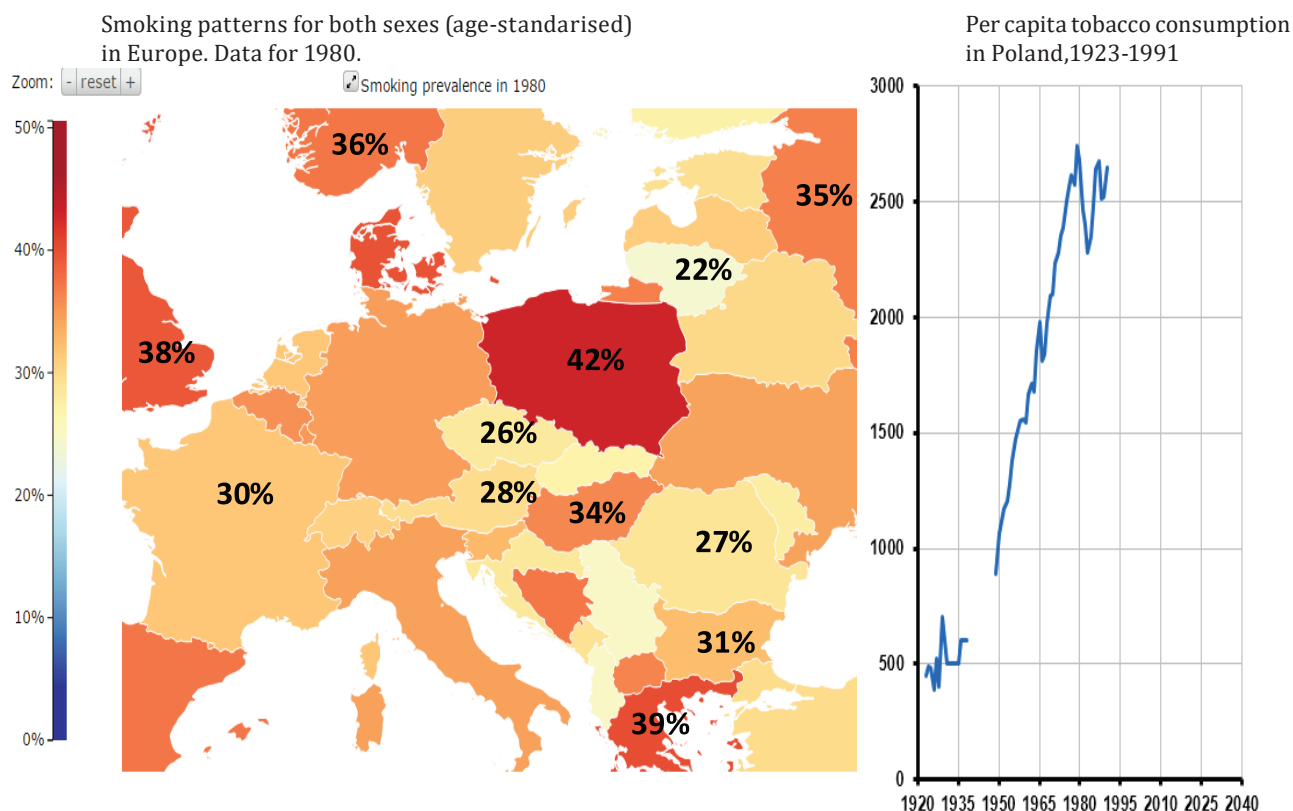


Figure 1. Smoking patterns for both sexes (age-standardised) in Europe (data for 1980) and per capita tobacco consumption in Poland, 1923-1991

Source: Institute for Health Metrics and Evaluation, 2014; Source: Polish Office for General Statistics, 2012

Similarly, annual alcohol consumption increased from about 3 litres per person in 1950 to almost 9 litres in the 1980s [2, 5-8]. Unlike infectious diseases, the health impact of smoking and alcohol on the health of the population was generally not attributed great importance by the authorities [2, 9-11]. This was despite the Semashko doctrine placing the whole responsibility for public health on the state.

¹ This paper is partly based on the following reports – 1, 2, 3.

² The Semashko model of centralised healthcare system was introduced in the USSR and, after World War II, in all the satellite state of Soviet Bloc.

³ In another socialist state Mao Tse Tung, the leader of the Chinese revolution, pledged to provide the working class jobs, housing, and... tobacco.

The dramatic increase in premature mortality in Central and Eastern Europe.

In result, from the 1960s the improving trends in public health were suddenly reversed. An increase in premature mortality among young and middle-aged adults began, first in the 1960s and 1970s among men, and in the following decades also among women. This phenomenon is illustrated by Figure 2, which shows that from the mid-1960s the life expectancy of Polish males aged 20+ began to decrease.⁴

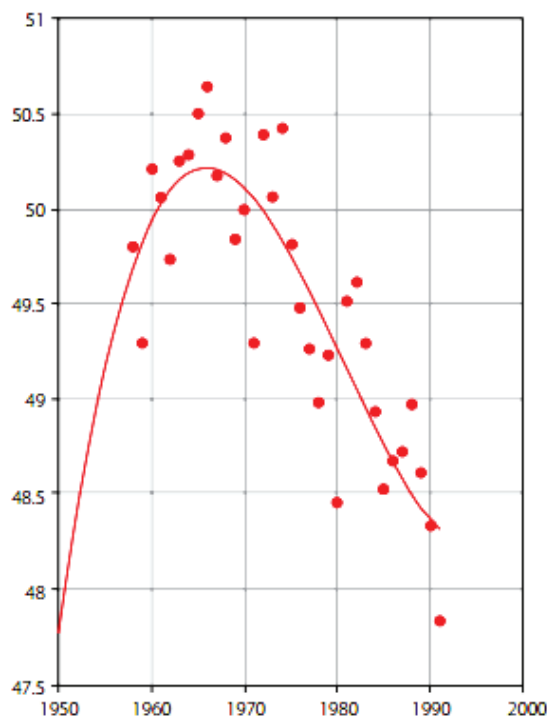


Figure 2. Life expectancy in men aged 20+ in Poland, 1958-1991 (2)

The most important contributor to this decline were lifestyle-related illnesses, primarily linked with smoking and alcohol consumption [2, 8, 12-13] a similar “natural experiment”, in which population were exposed to, a rapid growth of cigarette and alcohol consumption, was also taking place in other Eastern European countries, for example in Hungary, leading to similar health outcomes. By the late 1980s, heart attacks and lung cancer (a disease almost exclusive to smokers) in Poland and Hungary reached the highest levels ever recorded in the world [8, 13-16].

In Poland, the public's awareness of this health catastrophe was fragmentary. More than half of all Poles believed that smoking was not harmful to health. While public health experts continued to sound the alarm about the exploding smoking epidemic, they failed to make themselves heard in the public debate [6]. For example, the influential report entitled *Experience and the Future*, prepared by independent experts for the oppositionist Solidarity movement in the early 1980s, in which Poland's health problems featured prominently, did not include a single word pointing to smoking as one of the key causes underlying the nation's health collapse. In an witness seminar conducted in 2016, Józef Koziół, the Deputy Prime Minister of Poland in the 1980s, remembered that while his government was concerned about the high vodka consumption levels, and attempted to regulate alcohol, the question of harmfulness of smoking cigarettes was rarely, if at all, discussed at government meetings [17-18]. The trade union movement, including the new self-governing union Solidarity, and its leader Lech Wałęsa personally, believed that cigarette prices should be kept low and that was the government's duty to guarantee to the working classes access to cheap tobacco. Solidarity threatened a nationwide strike when the government announced cigarette price increases in 1981 [17-19].

Meanwhile, premature mortality figures among the middle-aged, as well as cardiovascular morbidity (mainly heart attacks), lung cancer, liver cirrhosis, and sudden death from external causes (accidents, injuries, poisonings, etc.) reached record levels in Poland [10, 20]. This epidemic of “man-made diseases” (diseases and deaths resulting directly or indirectly from human activities) remained one of Poland's most significant challenges until the collapse of the communist authorities in the late 1980s [2]. According to World Health

⁴ At the same time, mortality decreased among infants and children maintaining a consistently good European standard.

Organization (WHO) estimates, in 1990 the chances of a Polish 15-year old boy living to the age of 60 were lower than those of his peers in China, Latin America, or India [14, 21].

Political and economic change – Democracy is healthier

In 1989 many experts believed that the health situation in Poland was going to deteriorate further [3]. As communism was collapsing, it was replaced in the early 1990s by anxiety about the future, the impoverishment of society and the appearance of the previously non-existent phenomenon of unemployment. All these developments seemed to foreshadow severe consequences for public health. Forecasts threatened serious increases in infant mortality and child mortality. The increase in premature death among young adults and the middle-aged in the years 1988-1991 appeared to justify those concerns [22-26]. The opening up of the Polish market, the takeover of the tobacco industry by transnational tobacco corporations (TTCs), and the launch of cutting-edge marketing techniques to sell unhealthy products such as cigarettes – all these factors seemed to indicate that smoking rates were only going to increase further. The tobacco industry set itself the ambitious task of bringing about a 10-20% increase in total cigarette sales in Poland in the 1990s [27].

However, it soon became clear that the collapse of authoritarian communism meant not just the liberalisation of markets and the entry of TTCs, but also the awakening of a vibrant health advocacy movement. A social movement promoting better health, and warning about the health risks of smoking, had been operating in Poland since the early 1960s. However, these groups failed to engage in modern public health campaigning and did not have a significant impact on society [18, 28-30]. It was only after the democratisation of the political system, including the introduction of free elections and a multiparty parliament, free mass media, alongside Poland's preparations for accession to the European Union, that the right conditions for the establishment of an efficient health advocacy movement were created [31].

Role of the third sector – birth of civil society and international collaboration in health

Health advocates exploited the new avenues of action opened to them by the advent of democracy, free civil society, and independent media. Within this political situation, numerous new civil society groups pursuing various social goals sprung up. One of these organisations was the Health Promotion Foundation (Fundacja „Promocja Zdrowia”), founded in 1991. Its guiding purpose was to bring about a parliamentary tobacco control law that would help tackle Poland's smoking epidemic [1, 17-19, 32]. Later, the Foundation became a crucial actor co-ordinating broader tobacco control activity in Poland, as well as in other countries of Central and Eastern Europe.

Within its programme, the Foundation:

- established, supported, organised ‘movements for health without smoking’;
- planned, organised, and disseminated educational programmes and trainings ‘Smoking or Health’;
- planned, held, and supported social anti-tobacco campaigns;
- arranged, twice every year, special events supporting quitting smoking – the WHO No Tobacco Day on 31 May, and the Great Polish Smoke out in mid-November;
- developed and organised training of doctors and nurses in smoking cessation;
- supported scientific research projects;
- organised scientific conferences and seminars, and sent delegates to such events;
- collaborated with national and international organisations, such as UICC, the WHO, or various higher education institutions.

One of the key achievements of the Health Promotion Foundation was the creation of a broad civic movement with the goal of eradicating tobacco-related diseases. This movement was strongly tied with the medical community. A particularly significant role was played by oncologists, concerned about the lung cancer epidemic developing in Poland. In the early 1990s, cardiologists also became actively engaged in this movement, led by the then director of the cardiology institute in Warsaw, professor Zygmunt Sadowski, as well as doctor Stanisław Grzonkowski, later a parliamentarian and the chairman of the health committee of the Polish Sejm [1, 33]. Within a short time, the movement expanded to various institutions and fields of activity. Its breadth and diversity were a key factor in the successful realisation of the tobacco control programme in Poland. The composition of the movement is illustrated by Figure 3.

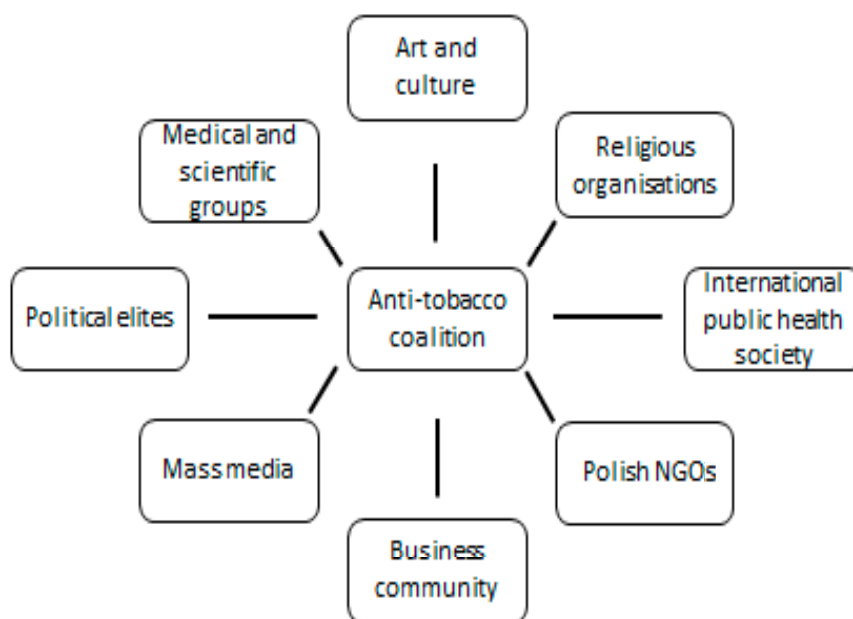


Figure 3. Polish anti-tobacco coalition in 1990s

Source: Zatoński M. PhD thesis. Tobacco control in Poland under communist rule and in the post-communist period. (in preparation)

An essential element of the anti-tobacco campaign was the growing quantification of how serious a health problem smoking represents, and determining the possibilities for its solution. It was decided that both of these activities should be science- and evidence-based. Already in the 1980s, a series of descriptive and analytical epidemiological studies were launched [5, 8, 20, 34-40]. At that same time, Poland also became a country of special interest for the WHO and international medical organisations [4]. Many eminent health researchers from Western countries – Europe, the USA, Australia and Canada – such as Peter Boyle, Neil Collishaw, Richard Doll, Nigel Gray, Tony McMichael, Richard Peto, Judith Watt, Alexander Walker, Walter Willett, became involved in the preparation of a public health programme dedicated to the control of tobacco - related diseases in Poland [7, 28, 42].

One of the most important milestones was the preparation of a roadmap for tobacco control in Poland and other Eastern European countries. As the democratic changes were unfolding in much of the region, a conference entitled “New Europe without Tobacco” was held in Poland on 27-29 November 1990. The conference was organised by Polish health organisations (the Polish Anti-tobacco Society, the Polish Medical Society, the Oncology and Cardiology Society, etc.) in cooperation with the IICC (Union Internationale Contre le Cancer), the American Cancer Society (ACS) and the WHO. The conference's honorary patron was Lech Wałęsa, chairman of Solidarity, who issued a written declaration of support to its participants. Likewise, former US President Jimmy Carter, the US Surgeon General and Senator Edward Kennedy sent letters expressing their backing for anti-tobacco activities in Poland. The Kazimierz Conference was the first meeting of health advocates from Eastern Europe with their Western European, North America and Australian colleagues, aiming to share examples of best practice from countries with more advanced tobacco control provisions [1, 37, 41, 43-44].

The conference's message was mainly addressed to the political leaders of Central and Eastern Europe. It concluded with the Kazimierz Resolution, a roadmap setting out a strategy for reducing the health consequences of smoking in Eastern Europe. The participants of the conference included health advocates from Poland, but also key politicians (members of the Sejm and the Senate, the Ministry of Health, including the Chairman of the Chamber of Medicine, representatives of Cardiology, Oncology, Lung Diseases, social organizations, nurses, etc.), which meant that the tobacco control roadmap reached a wide group of key actors and decision-makers. The Resolution pointed out that the primary way of reducing the health consequences of smoking in a democratic system is through appropriate legislative action. The conference in Kazimierz also created the basis for cooperation in this area between the countries of Central and Eastern Europe, and in the following years, Poland became one of the hubs for co-ordinating work in this field [1].

For Polish health advocates, the conference in Kazimierz marked the start of work on a parliamentary legislative act aimed at limiting the health consequences of smoking. At the same time, the Resolution was an appeal to the new democratic governments of Eastern Europe to eliminate as quickly as possible the differences in health that existed between them and Western Europe through comprehensive public health policy.

All the actions suggested by the Resolution were implemented in Poland in the next years. They constituted the core of the Polish Anti-Tobacco Law that was adopted by Poland's Parliament at the end of 1995.

Role of the state and legislation – The Polish Anti-Tobacco Law

Following the conference in Kazimierz, health advocates in Poland were equipped with the necessary instruments to launch their campaign against tobacco-related diseases. The main banner under which this intervention was implemented was the issue of malignant tumours resulting from smoking. In the early 1990s, these tumours accounted for almost half of all cancer cases in middle-aged men in Poland (aged 35-54). Lung cancer was identified as the main area for intervention, as a disease whose morbidity rate was growing particularly rapidly, and one whose victims typically died within just five years of diagnosis. Also, lung cancer was the only tumour site where a significant decrease in incidence had been observed in several countries (the United Kingdom, USA and Finland).

In 1989, the upper legislative body of the Polish parliament, the Senate, was the only fully democratically elected political institution in Poland. A high percentage of senators were physicians (representatives of a profession with considerable social prestige). The natural decision of the health advocates was to attempt to initiate legislative action in the Senate. Shortly after the conference in Kazimierz, a working group associated with the Health Promotion Foundation developed the first version of the Anti-Tobacco Law and its justification. The pro-health arguments presented were well documented scientifically: smoking was pinpointed as one of the leading causes of Poland's dramatic levels of premature mortality. The draft bill, based on WHO standards⁵ [45], proposed a comprehensive set of laws that would help reduce cigarette consumption. This met with the approval of several key politicians. In 1991, a group of senators was formed (led by Dr. Maciej Krzanowski of Cieszyn) in order to prepare legislative initiatives in this area. Shortly after, the bill was submitted to the Senate.

The draft bill triggered tremendously strong opposition from the tobacco lobby. Politicians in the newly democratic Poland for the first time encountered the activities of a very well-organised interest group prepared to use any means to block the legislation. The debate in parliament was very quickly made public, with the mass media picking it up as an issue of great societal interest. The health of Poles and the destructive effects of tobacco smoke became the subject of widespread debate for many years to come. Since the health arguments could not be disputed (which does not mean that efforts were not made to undermine them), the tobacco industry attempted to direct the discussion to the question of whether a parliamentary act – a mere “piece of paper” – could improve the health of the nation. The tobacco industry questioned the effectiveness of a ban on advertising, health warnings, economic regulation, education – and all regulations in general [31]. The industry's leaders proposed that the area to be focused on should be smoking among children. They also called for freedom of speech and warned parliamentarians that introduction of the proposed restrictions would have a devastating effect on the development of the Polish economy.

Initially, the media and the public were sceptical about whether anti-tobacco regulations were needed. However, the health advocates' consistency in pointing to the catastrophic levels of health among the adult population in Poland, and tobacco's key contribution to them, eventually led to increased public support for tobacco control measures. During the last months of the debate, the opponents of the law, with their support eroding away, focused on the ban on cigarette advertising [46]. Maintaining the right to advertise cigarettes became the most crucial point in the discussion and the point of possible compromise. Meanwhile, international advisers, such as the WHO, suggested that the ban on advertising was actually the most important element of all the provisions included in the bill. Another issue of contention was the formation of a special fund dedicated to health promotion proposed by the bill. This was vehemently opposed by the liberal politicians in charge of state finances, who did not want the tobacco tax revenue to come with any strings attached.

Generally, however, support for the law steadily grew among the general public and politicians, regardless of their political orientation. Changes in public awareness of smoking harm were observed and the public debate increasingly focused on the mounting health costs of smoking cigarettes [22]. The example of other countries, where the image of smoking was progressively deteriorating, provided a strong point of reference to the Polish health advocates and had a significant impact on public opinion. This gradual change of attitudes did not go unnoticed by representatives of the political parties.

Taking advantage of the instability of the political situation in a country with an emerging democracy (the “short life” of successive governments and parliaments) and using targeted lobbying measures, the tobacco lobby tried to prevent the enactment of the law, or at least delay its passage till as late as possible. However, the work on the bill in the years 1990-1995 continued, regardless of which party had the upper hand in parliament.

⁵ The WHO call Polish anti tobacco law 1995 year „example for world”

The leaders of the successive groups promoting this work were Dr Maciej Krzanowski, a liberal, Dr Jerzy Matyjek of the Christian-National Union and – in the last phase of the legislative work – Dr Seweryn Jurgielaniec from the Democratic Left Alliance. On November 9th, 1995, the Sejm passed the bill with an enormous 90 percent majority of votes from all the political parties [1, 33] (Fig. 4).

- Anti-tobacco laws of 1995 and 1999 - highlights
 - Ban on sale to minors, vending machines, small packs
 - Ban on ads, promotion, sponsorship
 - Free treatment of tobacco dependence
 - Reduction of tar, nicotine, CO in cigarettes
 - Tobacco control fund (0.5%) from excise tax
 - **Introduction of 30% health warning labels**



WHO on the Polish Anti-Tobacco Law: “...an example to the rest of the world.”

Figure 4. The Polish Anti-Tobacco Law

Source: Zatoński M. PhD thesis. Tobacco control in Poland under communist rule and in the post-communist period. (in preparation)

The law was put into force despite a veto by the outgoing president, Lech Wałęsa, as it was signed by the newly elected president, Aleksander Kwaśniewski (a key role in this process was played by the Sejm deputy Jerzy Szmajdziński).

The Anti-Tobacco Law included all the elements that could be implemented in line with the WHO's Gold Standard, apart from a complete ban on tobacco advertising [45]. Amongst other provisions, the legislation effectively regulated the protection of non-smokers (including in the workplace) from tobacco smoke, and introduced the world's largest health warning labels on cigarette packs at the time [46]. The law required the government to prepare annual programmes to reduce the health consequences of cigarette smoking. A report on the implementation of the programmes was presented each year in parliament [1, 17-19, 32-33, 47-48].

The introduction of these legal regulations went ahead without any major obstacles, although there were some minor technical problems with implementation. The lack of separate, well-ventilated smoking rooms in many workplaces led the government to give a 5-year extension to employers to meet the conditions set out in the Law. As a result, some workplaces did not become smoke-free until early 2001. However, in the majority of cases, cigarette smoke disappeared from workplaces very quickly, especially in privately run companies, and smoking became possible only in specially designated areas.

After winning the battle against a full ban on advertising, the tobacco lobby immediately took very aggressive action against the large health warning labels on cigarette packs, arguing that this solution was incompatible with EU regulations and that it would hinder Poland's accession to the EU [31]. The tobacco industry also (not unjustly) saw such large warnings, which Poland introduced as the first country in Europe, as a dangerous precedent [46]. In fact, a few years later, the European Parliament, citing the Polish example, began work on introducing even larger health warnings in the European Union [1, 31, 33, 46].

Lobbying to prevent cigarette packs being printed with such large format health warnings was launched in the Polish parliament on an unprecedented scale. Health advocates were surprised to learn that the tobacco industry was represented in the work of the parliamentary committee by highly esteemed academics, lawyers, and prominent, highly respected celebrities. In the opinion of many political commentators, the extent and aggressiveness of the lobbying on this issue had no equal in the first decade of parliamentary democracy in Poland [1]. The attack launched, during a *vacatio legis*, on the already adopted Anti-Tobacco Law once again gave health advocates the opportunity to address the public opinion about the problem of the catastrophic health of

adult Poles resulting from smoking cigarettes. The tobacco lobby, undaunted by successive defeats, attempted to amend the provisions of the bill three times. During the last of these attempts, a few months before the elections, those taking part in the parliamentary debate almost came to blows.

The health advocates' struggle was closely monitored by the media – the more so since it was played out during the run-up to parliamentary elections. Due to the saliency of the arguments used and the high profile of the debate, lead author of this work was included by one of Poland's monthly magazines among the 100 most influential people in Poland in 1998. The battle waged in Poland did not go unnoticed by the international media [49].

Despite tremendous efforts and expenditure, on April 11th, 1997 the tobacco lobby eventually lost the battle to change the health warnings on cigarette packs (although this time the bill's supporters in parliament had only a small majority: 148 in favour, 122 against, and 100 abstentions). The Member of Parliament Seweryn Jurgielaniec played a key role when, just before the start of the vote, he persuaded his party colleagues in the parliamentary chamber to enact this important law for public health [1].

After two and a half years of negotiations, from the middle of 1998, health warning labels in Poland covered 30% of the two larger sides of cigarette packs and for some years were the largest in the world⁴ (in early 2001, larger warnings were introduced in Canada) [1]. Following Poland's accession to the European Union in 2004, health warnings became even larger and today cover 30 and 40% of the pack in line with the EU regulations, which were originally based on the Polish example [1, 31, 33, 46].

In 1998, the newly elected Parliament returned to the issue of cigarette advertising, alarmed by further scientific studies indicating that children, especially girls, were having increasingly early contact with cigarettes, and growing public concern about the aggressive advertising of tobacco companies, which, as most Poles noticed, was primarily aimed at the youth. There was fairly widespread agreement that there was a direct link between these two phenomena – aggressive advertising of cigarettes and the increasing prevalence of smoking among children – and that putting a stop to this phenomenon required a complete ban on tobacco advertising. This time, the drafting of the bill was quickly accomplished by Parliament (thanks to the activities of deputies Andrzej Wojtyła, the former Minister of Health, Stanisław Grzonkowski and Ewa Sikorska-Trela, heading the Parliamentary Health Committee), and in October 1999 a total ban on tobacco advertising in Poland was enacted. This ban, one of the first of its kind in Europe, was adopted by a large majority of Sejm deputies from across the aisle (374 in favour, 11 against, and 12 abstentions). Furthermore, a provision was introduced for 0.5% of tobacco excise duty to be set aside to finance programmes reducing the health effects of smoking (although with the exception of the year 2000, this provision was never implemented). At the beginning of December 2000, cigarette advertising disappeared from all billboards in Poland; since December 2001, tobacco advertising has been completely banned in the press [1, 33].

Health education – The Great Polish SmokeOut

Work on the bill, and the Parliamentary debate and mass media reports accompanying it, changed people's attitudes towards smoking. International research seems to indicate that, in the second half of the 1990s, the anti-tobacco advocacy in Poland ranked among the best-conducted health advocacy campaigns in Europe [6, 50] and the Polish Anti-Tobacco Law was considered one of the most progressive tobacco control laws in the world. For this reason, Polish health advocates and politicians were co-initiators of the WHO's first health convention in the world – the FCTC [45].

If one had to define a single health promotion action that had the most significant impact on health literacy among Poles, and their understanding of the magnitude of smoking harm, a strong contender for this title would be the Great Polish SmokeOut, inspired by the international SmokeOut campaigns, initiated by the American Cancer Society. The Polish edition was modified, adapted to the Polish cultural context, and conducted entirely by Polish civil society. Together with the WHO World No Tobacco Day, organised since the 1980s, it became one of the pillars of health education in Poland. The SmokeOut took place every year, on the third Thursday of November, and was strongly supported by the Health Promotion Foundation. For many years it was also organised in neighbouring Lithuania. Its main media sponsors were public radio and television and the largest Polish daily *Gazeta Wyborcza*. Support also came from other media. From the year 2000 onwards, it also increasingly involved local communities, with the participation of local media. Within just a few years, the SmokeOut became the largest regularly conducted public health campaign in Poland [51].

Annual surveys conducted to evaluate the effects of the campaign indicated that 80-90% of Poles heard about it. Thanks to this initiative, many smokers became motivated to reduce their smoking or quit altogether:

- every year 20-30% of smokers tried to reduce their smoking,
- every year approximately 1 million smokers tried to quit smoking,
- every year 200,000 to 400,000 people claimed that they quit smoking for good because of the campaign.

It can be estimated that over a dozen or so years the Great Polish SmokeOut campaign helped almost 5 million smokers quit. The significance of the campaign for the health of Poles can hardly be overestimated [1, 17-19, 32, 47, 51]. The reason for its popularity can be sought in a competition organised by the Health Promotion Foundation, which accompanied it every year. Any Pole who quit smoking during the calendar year preceding the SmokeOut could take part. The main prize was a week's holiday in Rome and a private audience with the "Polish" Pope John Paul II for a group of participants who declared they had quit smoking and whose names were picked in a prize draw. The support of the Catholic Church for the SmokeOut was crucial. From the beginning of the 1990s to the end of his life, the Honorary Chairman of the SmokeOut Organizing Committee was the Primate of Poland, Cardinal Józef Glemp, who played a key role in the success of the campaign [51, 1]

Every year, the organizers of the competition received 20-40 thousand competition forms, which were often accompanied by letters [1, 20, 32]. The lasting popularity of the competition was confirmed by the fact that in its 10th year (in the year 2000) more than 40,000 competition forms were sent in. Altogether between 1992 and 2000, the organisers received over 300 thousand entry cards / letters. The campaign and competition consistently attracted the attention of journalists and the public. Every year, as the campaign was held, thousands of articles relating to it were published in the mass media. Electronic media presented clips, guides, discussions and reports. Traditionally, the competition and the trip to Rome were reported by Poland's State Television channel TVP.

Treating addiction – role of health professionals, cytisine, and telemedicine

One of the most important tasks of the Health Promotion Foundation after the introduction of the Polish Anti-Tobacco Law was building a better system of tobacco addiction treatment in Poland. The Health Promotion Foundation conducted trainings and workshops for medical doctors, nurses, and other healthcare professionals. In collaboration with various institutions, the Foundation trained thousands of healthcare professionals in smoking cessation methods. The Foundation conducted special motivational actions for medical personnel, encouraging healthcare workers to quit smoking. This capacity building effort quickly bore results. The healthcare system became increasingly free from smoking, and more engaged in the anti-smoking activity. The Foundation also spearheaded the creation of the Tobacco Addiction Diagnosis and Treatment Consensus, a set of guidelines developed and disseminated by leading medical associations in Poland. A total of 150 thousand copies of the Consensus, via Medical Chambers, reached doctors in Poland [52,53].

From its very creation, the Foundation also researched the development and dissemination of smoking cessation drugs in Poland. Amongst others, the Foundation introduced and popularised nicotine replacement therapy in Poland. In the late 1990s, bupropion was introduced on the Polish market, followed by varenicline in the early 2000s. In the last several years all the drugs used to treat tobacco addiction were available on the Polish market.

The Foundation's contribution was crucial in ensuring that cytisine – a natural smoking cessation drug, a low efficacy partial agonist of alpha 4 beta 2 acetylcholine receptors in the brain – remained available on the Polish market [54]. While cytisine was available in Poland from the early 1970s, its use in treating tobacco addiction was marginal. In the 2000s, the Foundation launched a study on the effectiveness of cytisine as a smoking cessation drug. Based on this, in 2011/12 *The New England Journal of Medicine* published a report on its effectiveness (over 3 times higher than placebo) and safety. Soon after, cytisine became available over the counter. In 2016, the sale of cytisine in Poland reached almost 1 million packets (complete treatment cycles) (Fig. 5) [54].

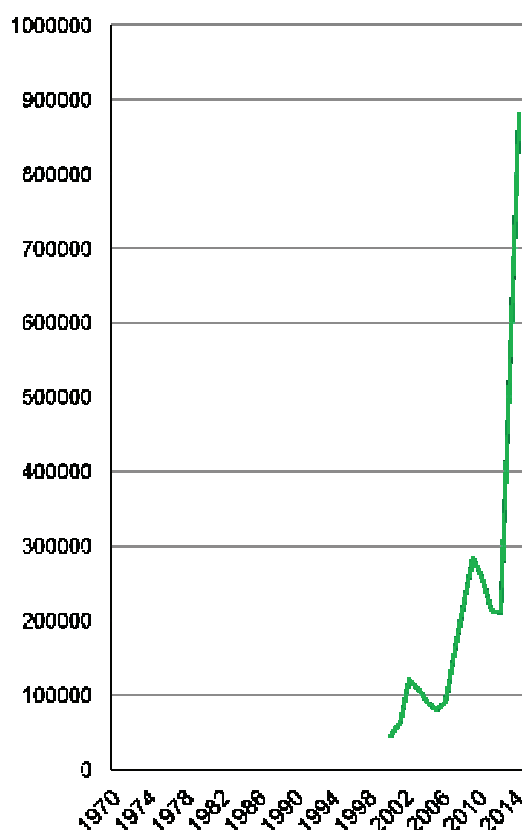


Figure 5. Cytisine sale in Poland (54)

Poland became one of the first countries where cytisine was used on a mass scale to quit smoking (today 12% of those attempting to quit in Poland use cytisine), and part of the reason for the persisting decline in smoking in the country [54]. The Foundation continues its work on documenting the safety and effectiveness of cytisine and actively participates in its dissemination on a population scale.

Recently, the Foundation became involved mainly in building tobacco addiction diagnostics and treatment mechanisms in hospital settings. A key challenge is the introduction of telemedicine, particularly in view of the approaching tobacco endgame, where most of the smokers, while declaring the willingness to quit (60-80%) [44], are deeply addicted, and have undertaken multiple quit attempts.

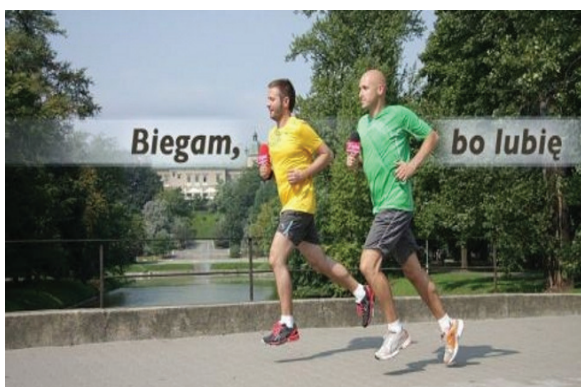
Unfortunately, most smokers in Poland still do not have access to comprehensive tobacco addiction treatment programmes, especially counselling. It is important to remember that most quit attempts end in failure – evidence-based addiction treatment methods, including digital and electronic aids, can help increase the chance of success, especially when initiated by medical doctors. The development of telemedicine tools supporting doctors and patients in smoking cessation can be particularly beneficial [55].

Legacy of tobacco control efforts in Poland

Those diverse actions conducted by the Foundation in collaboration with a broad array of partners paved the way for a rapid change in attitudes towards smoking and health. Health became an important, if not the most important value for the Polish society. A good illustration of this is the recycling of a slogan promoted by the tobacco industry in the 1990s – “I smoke because by like it” – to promote physical activity in the 2000s – “I run because I like it” (see Fig. 6).



"I smoke because I like it" campaign, 1995



"I run because I like it" campaign, 2012

Figure 6. Cultural shift – changing attitudes to health

Health became a subject of debate in a variety of contexts: from the Parliamentary chamber, through pages of newspapers and educational institutions, to local and religious events. The Catholic Church played an important role in eliminating the phenomenon of smoking, especially at the community level; the subject of the harmfulness of tobacco was brought up for example on the occasion created by premarital meetings required by the Church. School also became a place for warning about the effects of smoking and for instilling health-promoting behaviour, and campaigns promoting a smoke-free lifestyle were addressed not only to pupils, but also teachers and parents. Research evaluating the 'anti-tobacco climate' in European countries in the late 1990s showed that Poles were the staunchest supporters of anti-tobacco legislation out of all the European nations [50, 56].

Under conditions of democracy and market economy, health has gained a unique aspirational status among Poles. The growing popularity of healthy lifestyles could not be reconciled with smoking. People shifted to better diets, with higher consumption of fruits and vegetables, following the example set by the Mediterranean cuisine. Poles also began to take up various sports. Especially the better-educated Poles, more and more familiar with life in other countries, witnessed the decreasing tolerance towards polluting the air with tobacco smoke in many western states. In some circles, non-smoking became the fashion. Quitting smoking, now a socially desirable idea, became popular as a New Year's resolution [51, 1].

In the early 1990s, at the same time as the Polish civil society was mobilising and preparing tools and resources for its campaign against smoking-related diseases, quite unexpectedly the first signs of health improvement among Poles appeared. Despite the gloomy predictions of politicians and scientists, these changes proceeded at a rapid pace. The changes in tobacco consumption, smoking frequency and mortality rates in Poland for men and women in age group 35-54 years are presented in Figure 7.

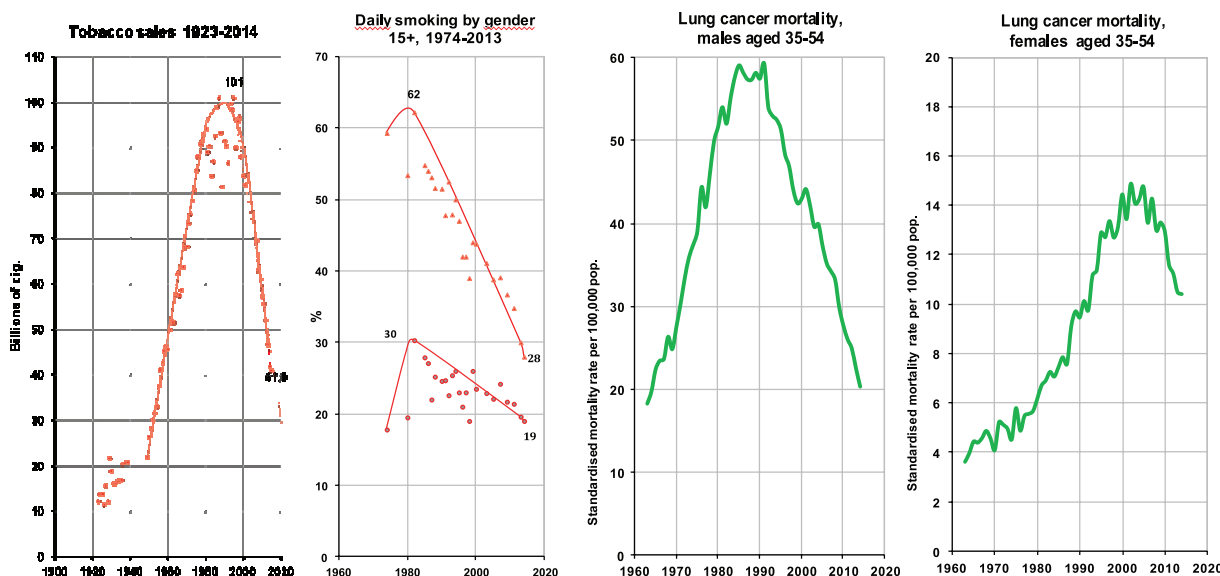


Figure 7. Cigarette sales and smoking in Poland vs. lung cancer mortality, male and females in Poland, per capita [32]

Another good illustration of the progress in Poland are the changes in lung cancer time trends in men and women in comparison to Hungary (Fig. 8).

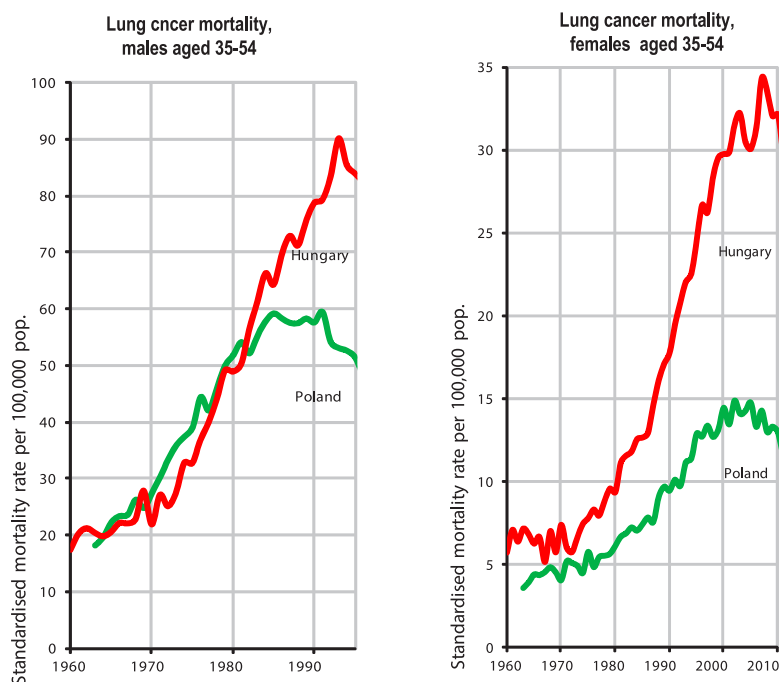


Figure 8. Lung cancer mortality rates in Poland and Hungary, men and women, 35-54

In the years 1960-90, lung cancer mortality rates sharply increased in men in both countries at a similar pace. After the 1990s, these trends diverged. Thus, we have witnessed a sustainable lung cancer decline in Poland – in men from 1990 and in women from 2000 (see Fig. 7). In Hungary, lung cancer mortality rates continued to increase in both men and women for next 10-20 years and reached one of the highest levels ever recorded in the world.

Summary and recommendations

In the late 1980s, Poland recorded the highest per capita sales of cigarettes in the world. This resulted in one of the highest levels of lung cancer. From 1990, the sale of cigarettes began to decline, and since then it fell by 60%, from about 100bn cigarettes per annum in the early 1990s to around 40bn in 2015. A similar drop was registered in smoking prevalence among men, from 65% to 25%, and in women from 30% to 18%. Lung cancer rates in men between the ages of 34 and 54 hit a peak in 1990, and among women in the early 2000s, followed in the subsequent years by a rapid decrease, in some age groups by over a half (see Fig. 7). Accordingly, the decrease in frequency of smoking within the Polish population also led to a significant drop in other tobacco-related diseases [8, 29, 42], with the largest decline in the number of cases reported in cardiovascular diseases, primarily heart attacks [57-59]. The risk attributed to smoking in this disease is 30%⁶ [6, 60].

Throughout the 1990s, one of the fastest health gains in the world was observed in Poland (Fig. 9).

⁶ Whereas, for example, epidemiological estimates for England between 1990 and 2010 show that half of the decrease in ischaemic heart disease are a result of the decreases in smoking (Simon Capewell).

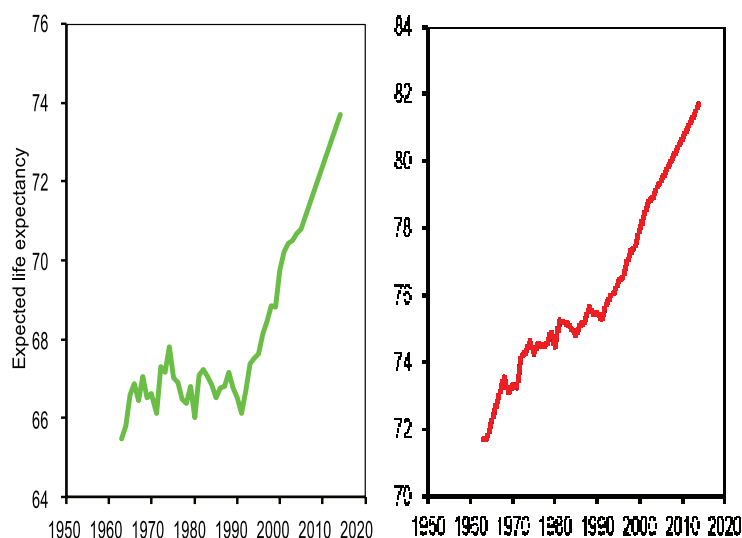


Figure 9. Life expectancy in Poland, 1965-2014

Undoubtedly, one of the main reasons for this, although not the only one, was a sharp decrease in the frequency of smoking. A study published in the *Lancet* in May 2017 showed that between 1990 and 2015 the decline in smoking frequency among adult populations in Poland was one of the fastest in Europe [26, 33, 61]. The annual decrease in smoking frequency at that time was 1.7% for men and 0.9% for women.

The positive trend in smoking cessation is set to continue in Poland. Opinion polls show that Poles themselves do not want to smoke, and 60% of smokers want to quit [44]. In addition, the trend is similar among children. For example, in the group of 13-15 year-olds daily smoking has halved in the last decade and is under 10% among both boys and girls [62, 63]. Still, the road ahead to the eradication of lung cancer among smokers is still a long one, with more than 8 million Poles smoking and about 40 thousand dying every year prematurely due to tobacco-related diseases [43].

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