The epidemiological projection for Poland and the region in 2025/2026

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Abstract

Aim. Anticipate key public-health threats for Poland in 2025/26 amid climate change, intensified mobility of goods and people, migration, rapid ageing and uneven urban–rural change, within the window created by the Year of Health Education & Prevention and the new Civil Protection Act and EU Council presidency.

Concept. Integrated One Health surveillance and preparedness linking human, animal and environmental signals (clinical, wastewater, border checks) with coordinated risk communication and education across sectors.

Results. Climate extremes, zoonotic and food-borne risks (H5N1, Haff disease), rising enteric and nosocomial infections, very low yet monitored COVID-19 activity, post-peak pertussis, stable but persistent HIV/TB burdens, and AI-driven bio- and info-threats; vaccination updates proceed while the new, optional school health-education course omits critical topics like misinformation and disaster readiness.

Cognitive value. Delivers a concise, forward-looking map of intersecting risks, operationalises One Health beyond rhetoric, and pinpoints surveillance, communication and curricular gaps that policymakers and practitioners can address immediately.

Keywords: health security; One Health; climate change; migration; population ageing; Civil Protection Act

Introduction

With climate change, increased mobility of goods (e.g. increased traffic through the ports of Tri-City and Świnoujście) and people (e.g. further records at regional airports, predicted for 2025 and 2026), increasing migration (e.g. war in Ukraine or migration from the Global South), and an ageing population, our objective is to predict current and potential health risks in Poland for the year 2025/26.

As such, 2025 is to be the European Year of Health Education and Prevention, with the Civil Protection and Defence Act were coming into force on 1 January 2025 *(Republic of Poland, 2023)*. Hence, population health security, at least in the declarative sphere, is a priority. Also on 1 January 2025. Poland took over the presidency of the Council of the European Union for 6 months and was obliged to coordinate responses to eventual crises (emergencies).

Results

Climate change and One Health

Heat waves, droughts, floods (Jarynowski, et al., 2025), wildfires - are all likely to become more frequent and intense locally, adversely affecting the health of people, animals and the ecosystems (IPCC, 2023). On the other hand, a reduced number of chilly days may reduce the heating intensity, which may improve air quality in many parts of Poland. An important element of adaptation is to prepare society to behave appropriately in emergencies. The years 2025/26 will be another period of increased activity of hygiene, veterinary and plant health inspectors overseeing the border security against the entry into the country of particularly dangerous and highly contagious diseases at check-points and at airports and seaports (in January 2025 in Germany, and March/ April 2025 in Slovakia and Hungary our departments have already reviewed a new epizootic of foot-and-mouth disease). Endemic Vibrio Cholerae infection in summer 2025 near Baltic Sea Coast, indicates that similar threats could happen more often next summer.

COVID-19

The COVID-19 incidence peak in Poland was at the end of October 2024 and in July 2025. Currently circulating variants do not compete with other common influenza-like infections. As expected worldwide, no new variants are expected to emerge by spring or summer that could affect the current infection season. Special prevention measures outside of standard respiratory hygiene are unlikely to be needed. Poland had very low levels of SARS-CoV-2 infections from January to July 2025 - an average of 0.23-0.3 cases per 100 000 population - and zero or a single death per month. However, the waterwaste monitoring showed significant increase in summer 2025. Globally, two new subvariants are prevalent at present: LP.8.1 (about 21 %) and NB.1.8.1 (about 24 % of WHO global sequences in June), with their presence not confirmed in Poland due to limited sequencing.

Pertussis

Following the peak of cases in September and October 2024 (approximately 5,000 cases per month), the situation is stabilising. The peak incidence is usually observed in early autumn, and the cyclical nature of the disease and booster vaccination should reduce the number of cases in 2025.

War in Ukraine

Migrations from Ukraine via Poland no longer pose a significant epidemiological risk. Polio virus detections or HIV cases, although present, are under control. Education on safe sex and monitoring of tuberculosis and viral hepatitis will remain important in 2025.

Avian influenza

Cases of H5N1 virus infection in mammals in North America are raising pandemic concerns (CDC, 2025). Mammal-to-mammal transmission of the virus remains minimal for now, but monitoring and preparedness are key, especially in the context of bird migration and the poultry industry in Poland.

Vaccination

The immunisation programme for 2025 includes, among others, new guidelines for mpox, RSV and rabies vaccinations among high-risk groups. Pertussis vaccination coverage (e.g. free in pregnant women) should be as extensive as possible. The HPV vaccination programme for school children continues, which needs to be promoted effectively especially for girls in the last years of primary school. It is also to be expected that the negative trend of vaccination withholding by growing groups of people in Poland will continue, which requires specific educational and surveillance activities.

Haff

The latest outbreak of Haff disease in May 2025 (first time since II Word War in Poland) sent few residents of Vistula Lagoon region to hospital after they consumed eel and flounder from a single catch, but swift inter-agency action prevented serious complications. The very first recorded outbreak struck the Vistula Lagoon in the summer of 1924, affecting around a thousand people along the Polish-Russian shoreline. Although the precise toxin is still unknown, the illness's sporadic re-emergence shows how historical food-borne threats can return, underscoring the need for cross-border monitoring of fish and water quality

Enteric and nosocomial (healthcare-associated) infections

The increasing number of outbreaks of enteric infections and antibiotic resistance of bacteria are further challenges in 2025. AMR oriented hygiene education and infection monitoring need to be improved especially in the general population (Soltysiak, et al., 2023).

Flooding Borys

Flooding in the Odra basin in 2024 did not cause significant increases in waterborne infections, but a water quality monitoring system should be implemented. Wrocław has the opportunity to become a centre for water security research (Jaryowski, et al., 2025).

Health education

From September 2025, a new health education subject is due to be introduced in schools, but it will not be mandatory. Parents or pupils of legal age may choose to opt out and not take part in these classes at all (RPD, 2025). Although the syllabus promises to be broad, covering, for example, mental health, sexuality or digital addictions, it leaves little space for today's highly relevant topics such as medical misinformation, cyber security, disaster preparedness, vaccination, or sexually transmitted infections (Sewastianowicz, 2025).

In 2026, significant improvement is difficult to expect. Teacher shortages remain acute, and many educators feel insufficiently trained to deliver complex health content in an engaging, evidence-based way (MEN, 2025). Without curricular adjustments, pupils will continue to miss critical elements of modern health literacy. Nevertheless, the programme opens a window of opportunity: better preparation against anti-vaccine narratives, early integration of infodemic management skills, and potential synergies with the Year of Health Education and the EU presidency's focus on resilience.

It was easy to predict, and is now being observed, that the very introduction of health education has become a trigger point for far-right, anti-science and anti-vaccination groups. Narratives that frame the subject as state indoctrination or "Western ideological import" have already mobilised resistance and will continue to do so. These dynamics fuel infodemic activity, polarisation and disinformation around health and civil protection, with potential spillover into other public debates. This resistance does not invalidate the reform but underlines the need for careful monitoring of information environments, early engagement with parents and communities, and explicit integration of skills to navigate misinformation into the curriculum itself.

The first rollout should therefore be treated as a pilot stage, where both educational and social responses must be systematically studied. Findings from this period could serve as the foundation for a comprehensive prognosis/report in early 2026, focused on whether Poland's health education reform strengthens resilience against health threats or inadvertently magnifies social divides.

Infodemic risks

The infodemic, understood as an excess of rapidly circulating true and false information, not just malicious disinformation, will remain a significant challenge in 2025/26 (WHO, 2022). Even low-level signals, such as the detection of *Vibrio cholerae* in Baltic coastal waters in July 2025 without confirmed human cases, triggered widespread media and social-media activity. This illustrates how environmental surveillance findings can quickly escalate into public concern, producing confusion and disproportionate reactions.

Comparable information overload was observed during the pertussis peak in 2024 and the Haff disease outbreak in May 2025, when official advisories competed with anecdotal interpretations and alarmist commentary. In each case, the main epidemiological risk was amplified by uncertainty in the information space rather than by pathogen spread itself.

Infodemic dynamics in Poland therefore require closer integration with One Health preparedness:

- routine monitoring of information surges linked to outbreak signals,
- clear and consistent communication strategies coordinated across sectors,
- training of frontline professionals in basic infodemic management,
- international cooperation to address important issues (i.e. spillover effects) in border regions.

Without systematic approaches, information overload will continue to reduce trust and compliance, complicating responses to both biological and climate-driven health threats.

Bioterrorism and AI

The development of artificial intelligence brings new threats in terms of bioterrorism and disinformation. AI can be used to design pathogens and generate instructions, which requires global regulation and education in such volatile periods (Monem, 2025).

Table 1. Selected Infectious-Disease Outlook for 2025/2026. Own analysis

Threat	Status (late 2024 – early 2025)	2025/26 Projection	Notes
COVID-19	Autumn 2024 peak; variants no longer dominate other respiratory pathogens	Localised outbreaks during respiratory season, low mortality; annual vaccination recommended by MoH and EU for risk groups	No extraordinary measures anticipated beyond recommended immunisation
Pertussis	Sept–Oct 2024 peak (~5 000 cases/month)	Lower incidence due to booster campaigns and cyclic immunity	Free adult vaccination for pregnant women introduced 2025
Mycoplasma & other winter/ spring agents	Above-average activity	Expected increase in autumn 2025 following epidemic cycles	Media focus on hMPV abroad; no virulence change
Avian influenza A/ H5N1	US cattle/human cases in 2024; none in Poland	Risk of spillover during 2026 bird migration; poultry industry exposed	Contingency planning essential; high export dependence
HIV	Surge 2022–23; stabilisation in 2024	Stable but high incidence (~2 000–2 500 cases) in urban centres	Concentrated in academic cities; inclusive sexual-health programmes needed
Tuberculosis (incl. MDR)	Rise in 2022–23; stabilising	Gradual domestic decline; imported MDR persists	Cross-border screening remains necessary
Enteric & nosocomial infections	High Salmonella, norovirus, C. difficile outbreaks in 2024	Elevated norovirus activity in winter 2025; C. difficile trend upward	Linked to hygiene fatigue and ageing population
Zoonoses (WNV, rabies, tick-borne)	WNV detected in 2024; rabies stable; Lyme/ TBE rising	Prolonged tick season in 2026; risk of WNV overwintering	Early-spring vector control essential
Infodemic surges	Observed during pertussis (2024), Haff disease (May 2025) and Vibrio detections (July 2025)	Continued amplification of all signals (clinical, environmental, vaccination, climate) in traditional and social media	Requires social listening, monitoring and evaluation integrated with epidemiological surveillance
Health education backlash	Rollout announced 2025; contested by far-right/antivaxx groups	Resistance narratives expected to persist and expand in 2026	Needs evaluation as pilot stage; curriculum lacks misinformation/ disaster readiness
Climate extremes	2024 floods (Odra), 2023 heatwaves, local droughts	More frequent/extreme events with direct and indirect health effects	Opportunity for Wrocław to lead water-security research

Conclusions

Poland should dedicate 2025/26 to performing research, surveillance and communication gap analyses revealed by Cyclone Borys, preparing for a potential avian-influenza pandemic that could disrupt a crucial poultry industry, and strengthening resilience against AI-enabled hybrid threats. With COVID-19 largely relegated to the background and pertussis declining from its 2024 peak, the most pressing epidemiological challenges now lie at the intersection of zoonotic spillover, climate-driven vector expansion and information warfare.

The rollout of health education in schools, although a long-awaited reform, has already confirmed predictable risks: it has activated far-right, anti-science and anti-vaccination groups, fuelling infodemic dynamics and resistance narratives. These reactions were anticipated, but their early visibility highlights that health education is not only a curricular challenge but also a driver of social polarisation and information overload. Systematic monitoring of these effects, together with curricular adjustments and community engagement, will determine whether the reform becomes a tool of resilience or a new source of vulnerability.

The Chief Sanitary Inspectorate's BOND project, launched in 2025, may play an important role in building effective health communication capacity (WHO, 2022). If the Year of Health Education contributes to disseminating science across schools, universities and frontline services, the knowledge gained could be crucial for protecting public health – even if, ideally, it will rarely be needed. Enhancing inter-institutional collaboration and developing tools to monitor and combat both biological threats and infodemic surges will be key.

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