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Public Health Interventions to Mitigate Early Spread of SARS-CoV-2 in Poland

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This study aimed (1) to present public health interventions to mitigate the early spread of SARS-CoV-2 implemented in Poland between January 9 and March 29, 2020, and (2) to analyze the potential impact of these regulations on the early phase of the COVID-19 outbreak in Poland.





All legal regulations published in the Journal of Laws between January 9 and March 29, 2020, were analyzed. Out of 406 legal regulations identified, 56 were related to the COVID-19 outbreak. Moreover, the official announcements published on the governmental websites dedicated to the coronavirus and health issues were analyzed.

On March 4, Poland reported the first laboratory-confirmed COVID-19 case. On March 9, Poland introduced border sanitary control. Six days after the first laboratory-confirmed COVID-19 case, all mass events in Poland were banned. All schools and universities were closed 8 days after the first COVID-19 case. All gastronomic facilities and sport and entertainment services were limited starting on March 14. Eleven days after the first COVID-19 case, controls at all Polish borders were introduced, and a ban on entry into Poland by foreigners (with some exemptions) was implemented. Starting on March 15, all citizens returning from abroad had to undergo compulsory 14 days self-quarantine. On March 20, a state of epidemic was announced, which resulted in new social distancing measures starting on March 25.

In Poland, compared to other European countries, far-reaching solutions were implemented relatively early to reduce the spread of infection.

MeSH Keywords: **Coronavirus • Coronavirus Infections • COVID-19 • Epidemics • Health Policy**

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Background

On December 31, 2019, the Wuhan Municipal Health Commission informed the World Health Organization (WHO) China Country Office about cases of pneumonia of unknown etiology detected in Wuhan City, Hubei Province of China [1,2]. On January 9, 2020, the Chinese Center for Disease Control and Prevention reported that 15 of the 59 cases of pneumonia were caused by a novel coronavirus (later named SARS-CoV-2, the virus causing COVID-19) [3]. On the same day, information about the new coronavirus was presented to the international community through the International Health Regulations (IHR) alert system. Immediately after receiving this announcement, the Chief Sanitary Inspectorate, which is a public administration authority involved in public health services in Poland, established a response team responsible for developing guidelines and evidence-based strategies for controlling the SARS-CoV-2 epidemic [4]. The present study aimed to: (1) present public health interventions aimed at mitigating the early spread of SARS-CoV-2 implemented in Poland between January 9 and March 29, 2020, and (2) analyze the potential impact of these regulations on the early phase of the COVID-19 outbreak in Poland.

Material and Methods

This analysis includes public health interventions aimed at mitigating the spread of coronavirus disease (COVID-19) in Poland within 80 days after obtaining information on the health threat of coronavirus from the IHR system. All legal regulations published in the Journal of Laws between January 9 and March 29, 2020, were analyzed [5]. Out of 406 legal regulations identified, 56 were related to the COVID-19 outbreak. We also analyzed the official information and announcements published on the government website dedicated to the coronavirus [6], as well as official social media profiles of the Polish Ministry of Health [7] and the Chief Sanitary Inspectorate [4]. All nationwide public health interventions related to the COVID-19 outbreak in Poland were included.

Actions taken before the first COVID-19 case occurred in Poland

Starting from January 9, 2020, the Chief Sanitary Inspectorate has analyzed the epidemiological data and international recommendations published by the WHO, the European Centre for Disease Prevention and Control (ECDC), the Centers for Disease Control and Prevention (CDC), and the IHR and Early Warning and Response System (EWRS) messages. On January 20, the first travel warning for the novel coronavirus pandemic was released [8]. This travel warning provided brief information on 205 cases of pneumonia associated with a novel coronavirus as well as recommendations for travelers planning

to travel to Wuhan, China. On January 22, the Committee on Epidemiology, Infectious Diseases and Vaccinations developed a case definition of suspected COVID-19 [9]. Moreover, health-care professionals were informed about guidelines for dealing with suspected COVID-19 cases.

The first European case was reported from Bordeaux, France on January 24, 2020 [10]. In response to the occurrence of the first imported COVID-19 case in Europe, the Chief Sanitary Inspectorate prepared a standard of Passengers' Location Cards and leaflets about COVID-19 for returnees from East and Southeast Asia [11]. On January 25, 2 days after the Wuhan City lock-down, the first group of Polish students on an academic exchange in Wuhan returned to Poland. All students returning from Wuhan City were hospitalized in the infectious disease wards, and laboratory tests excluded SARS-CoV-2 infection [12]. On January 27, Germany declared its first confirmed COVID-19 case [13]; this was the first case of COVID-19 in a country neighboring Poland. The key activity in the last week of January was constant monitoring of the sanitary and epidemiological situation at the border administrative regions (voivodships), airports, and seaports. All airport procedures were regularly updated to reflect the current epidemiological situation [14]. On January 30, the WHO declared the coronavirus disease (COVID-19) outbreak a Public Health Emergency of International Concern (PHEIC) [15].

On February 2, a group of 30 Poles was evacuated from Wuhan, China. The operation was conducted under the leadership of France in cooperation with the European Union (EU) [16]. After landing in France, Polish citizens were transported by military plane from Marseille to Wrocław and then hospitalized in a military hospital at the infectious diseases ward. Laboratory tests excluded COVID-19. The travel warnings were published daily in February and were updated according with the current world epidemiological situation [17]. On February 22, the Italian authorities reported clusters of cases in Lombardy [18]. On February 23, the ECDC announced that the risk associated with COVID-19 infection for people from the EU was considered to be low to moderate [18]. On the same day, the Chief Sanitary Inspectorate recommended that travelers avoid all non-essential travel to Northern Italy (a total of 9 countries, including China, South Korea, Iran, Japan, Thailand, Vietnam, Singapore and Taiwan) [19]. Due to the growing number of COVID-19 cases in Europe, guidelines for medical staff were regularly updated. Moreover, several guidelines and recommendations were developed for specific professional groups as well as public and private entities. On February 29, 87 people were hospitalized as suspected COVID-19 cases, 146 were quarantined, and 3370 were under epidemiological supervision.

On March 2, the Lower Chamber of the Polish Parliament (Sejm) enacted the Crisis Act on special measures aimed at prevention and control of COVID-19, other infectious diseases, and

Table 1. Public health interventions to mitigate early spread of SARS-CoV-2 in Poland (as of March 29, 2020).

Specific	Details	Date enacted	In force	Number of cases when enacted	Days since the first case when cane in force
Crisis act: the Law on special arrangements for the prevention and combating of COVID-19, other infectious diseases and crisis situations caused by them	– Administrative, budgetary and epidemiological measures adapted to manage a possible epidemic of COVID-19 or other infectious diseases	March 2	March 8	–	–
First laboratory-confirmed COVID-19 case in Poland (March 4)					
Obligation to quarantine, epidemiological supervision or hospitalization related to COVID-19	– People suffering from or suspected to have a COVID-19 can be ordered to undergo treatment in hospitals – Obligation to quarantine or epidemiological supervision persons who have close contact with confirmed or suspected COVID-19 case	March 7	March 7	6	3
Border sanitary control	– Passengers' Location Cards – Temperature measurement	March 9	March 9	17	5
Local transmission phase of SARS-CoV-2 coronavirus (March 10)					
Cancellation of mass events	– All mass events gathering at least 1,000 participants outside of buildings were canceled – All events gathering 500 or more participants inside buildings were canceled	March 10	March 10	22	6
Closure of universities	– All academic classes were cancelled – Researcher and scientific activities has been maintained, but scientists were encouraged to remote work	March 11	March 12	31	8
Closure of schools and childcare providers	– Closure of all public and private educational institutions – All childcare providers were closed	March 11	March 12	31	8
Closure of culture institutions	– Cultural institutions, such as philharmonic orchestras, operas, theatres, museums, and cinemas suspended their activities	March 11	March 12	31	8
Unified hospital for infectious diseases (COVID-19 hospitals)	– 19 hospitals were transformed into a unified hospital for infectious diseases, to provide full access to medical services for COVID-19 cases (at least one hospitals located in each of the 16 administrative regions in Poland)	March 13	March 16	68	12

Table 1 continued. Public health interventions to mitigate early spread of SARS-CoV-2 in Poland (as of March 29, 2020).

Specific	Details	Date enacted	In force	Number of cases when enacted	Days since the first case when cane in force
State of epidemic emergency	<ul style="list-style-type: none"> – Restaurants, bars, and cafes were able to operate only takeaways and delivery – In shopping mall with a sales area of over 2,000 square meters, only grocery stores, pharmacies and laundry facilities remained open – Fairs, exhibitions, congresses, conferences and sporting events have been suspended – Entertainment and recreation facilities including dance clubs, music clubs have been suspended – Public gatherings of more than 50 people have been banned – Export of personal protective equipment and disinfection agents has been limited 	March 13	March 14	68	10
Temporary closure of borders to non-citizens	<ul style="list-style-type: none"> – Controls at all Polish borders have been introduced – A ban on entry to Poland for foreigners (with some exemptions) was implemented – All citizens returning from abroad were obligated to undergo 14 days of civil quarantine – Compliance with the quarantine obligation was checked by the police and dedicated mobile application “home quarantine” – All international passenger air and rail services have been suspended – A charter flight a program called “Flight home” (in polish “LOT do domu”) was initiated 	March 13	March 15	68	11
State of epidemic	<ul style="list-style-type: none"> – Organizational improvements to facilitate the prevention and combating of COVID-19 epidemic have been introduced 	March 20	March 20	425	16
Sate of epidemic and its amendment	<ul style="list-style-type: none"> – Public gathehering were limited to a maximum of 2 people – Audience at the religious gatherings, funerals or marriages was limited up to 5 participants – People traveling on foot have been obligated to keep 1.5 meters apart – All non-essential travel was prohibited, with the exception of travelling to work, SARS-CoV-2 control related activities, or necessary everyday activities – Number of people who can use public transport was limited by half 	March 24	March 25	901	21

the resulting crises situations [20]. This act provided administrative, budgetary, and epidemiological measures to manage a possible epidemic of COVID-19 (as presented in Table 1). Moreover, the Chief Sanitary Inspector recommended canceling all conferences and other events for medical professionals [21].

The number of confirmed COVID-19 cases and legal solutions introduced by the Polish authorities are presented in Figure 1.

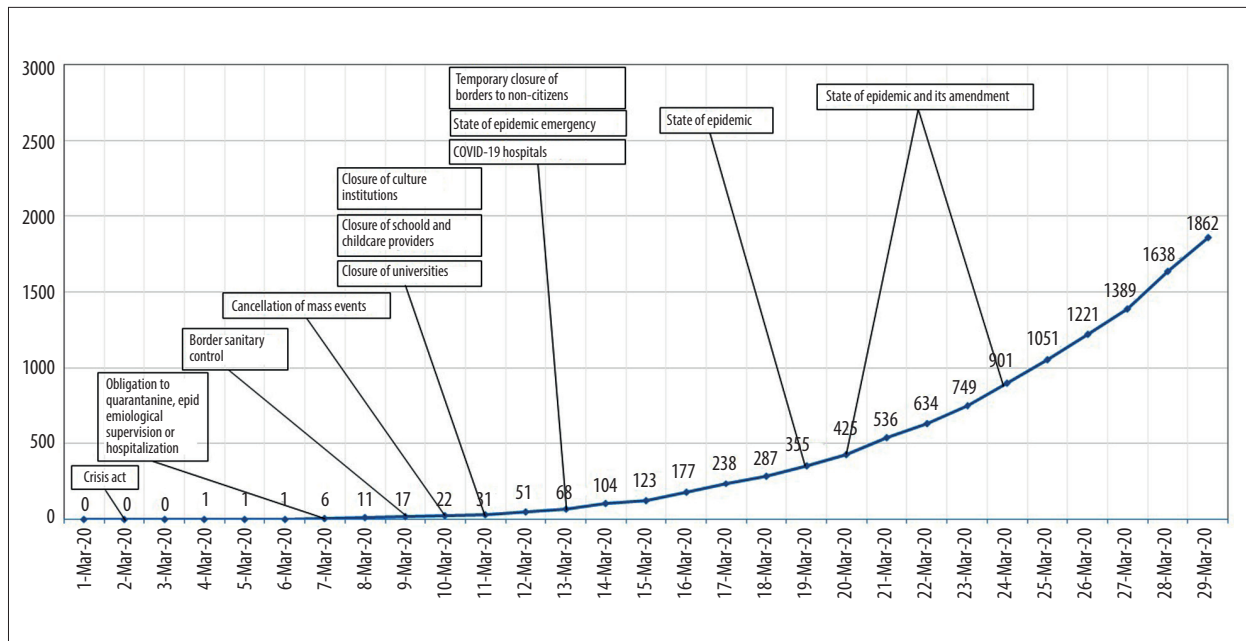


Figure 1. Number of confirmed COVID-19 cases and legal solutions introduced by the Polish authorities (date enacted).

The first laboratory-confirmed COVID-19 case

On March 4, Poland reported the first laboratory-confirmed COVID-19 case, a 66-year-old man who had arrived from Westphalia, Germany [22]. COVID-19 as an infectious disease is subject to compulsory treatment under the Act of 5 December 2008, on preventing and combating infections and infectious diseases among people [23]. On March 7, the ordinance of the Minister of Health regulated the obligation to quarantine or epidemiological supervision persons who had close contact with a confirmed or suspected COVID-19 case [24]. Between 1 and 7 March, the first COVID-19 cases were recorded in the Czech Republic and Slovakia [25]. On March 9, Poland introduced border sanitary control. Sanitary checks were in force at 4 Polish border crossings with Germany and 1 with the Czech Republic, as well as the country's seaports [26]. Moreover, travelers were obligated to fill out passengers' location cards and to undergo body temperature measurement.

By March 9, 17 laboratory-confirmed COVID-19 cases had been reported (all imported from Germany, Italy, or the United Kingdom).

The local transmission phase of SARS-CoV-2 coronavirus

On March 10, the WHO claimed Poland as a country with the local transmission phase of SARS-CoV-2 [27]. On the same day, all mass events of least over 1000 participants outside of buildings and 500 or more participants inside buildings were canceled. On March 11, the closing of schools, childcare facilities, and universities was enacted [28,29]. All educational activities

at schools and universities were suspended from March 12 to March 25 (with a further extension to April 10). Research work was allowed, but remote work was recommended for academics. On March 12, all cultural institutions, including philharmonic orchestras, operas, theatres, museums, and cinemas, were closed [30]. By March 12, there were 51 laboratory-confirmed COVID-19 cases in Poland, and the first death due to COVID-19 was reported on March 12.

State of epidemic emergency

On March 13, the Polish Minister of Health enacted a state of epidemic emergency [31].

Various social distancing measures were implemented. All gastronomic and entertainment services and the operation of shopping malls were limited starting on March 14. Restaurants, bars, and cafes were able to provide food takeaways and delivery [31]. In shopping malls with a sales area of over 2000 square meters, only grocery stores, pharmacies, and laundry facilities remained open [31]. Banks and financial facilities could operate without additional restrictions. The organization of fairs, exhibitions, congresses, conferences, and sporting events was temporarily suspended. Sports facilities such as swimming pools, gyms, and fitness clubs were closed. Moreover, all entertainment and recreation facilities, including dance clubs and music clubs, were suspended [31]. Public, state, and religious gatherings of more than 50 people were banned.

On March 14, the Ministry of Health announced a list of 19 hospitals that were transformed into single-purpose hospitals

for infectious diseases (COVID-19 hospitals). At least 1 hospital was located in each of the 16 administrative regions. The establishment of COVID-19 hospitals was aimed at providing full access to medical services for COVID-19 cases as well as limiting the spread of infection in other medical facilities.

To make personal protection equipment available, the sale of key medical supplies was regulated. On March 14, a total ban on export of respirators and cardio-monitors was ordered [31]. The export of personal protective equipment and disinfection agents was also limited, and state-owned companies started producing ethanol-based disinfectants.

To limit the number of imported COVID-19 cases, a ban on entry into Poland for foreigners (with some exemptions) was introduced starting on March 15 [31,32]. Controls at all Polish borders were introduced for 30 days (10 days, with a possible extension to the next 20 days) [32]. All Poles returning from abroad were obligated to undergo 14 days of self-quarantine [31]. Compliance with the quarantine obligation was checked by the police. Violating quarantine was punished with a fine of 5000 PLN (about \$1200 USD). Moreover, on March 19, a mobile application “Home quarantine” was launched by the Ministry of Digital Affairs [33, 34]. Everyone quarantined after returning from abroad received a text message with a link to download the application. In addition to controlling compliance with quarantine (the obligation to send “selfie” photographs at specified intervals), the application provided access to scientific knowledge about coronavirus. The application allows contact with a social worker and reporting current needs [33,34].

On March 15, Poland suspended international passenger air and rail services [35]. To enable citizens to return to the country, LOT Polish Airlines (the national airline) launched a charter flight network as part of a program called “Flight home” (in Polish, “LOT do domu”). From March 15 to March 27, over 37 000 citizens returned to Poland as part of the charter flight program [36].

By March 19, Poland reported 355 laboratory-confirmed COVID-19 cases and 5 deaths related to COVID-19.

State of epidemic

On March 20, the Polish Prime Minister announced a state of epidemic (legally provisions aimed at containing the coronavirus epidemic) [37]. In addition to maintaining the current restrictions, a number of organizational improvements were introduced to facilitate prevention and combat the COVID-19 epidemic. Moreover, new measures to mitigate the spread of the disease were announced on March 24 [38]. New social distancing measures limited gatherings to no more than 2 people, with an exception for religious gatherings, funerals, or marriages, which were limited to no more than 5 participants (starting from March 25) [38]. People traveling on foot had to keep at least 1.5 meters apart. Moreover, all non-essential travel was limited, with the exception of commuting, epidemic control-related activities, and necessary everyday activities like shopping, buying medicines, or walking a dog. The number of people who could use public transport was limited to half of the seats [38]. These restrictions were initially in force up to April 11.

On March 28, the Lower Chamber of the Polish Parliament (Sejm) enacted the COVID-19 package of Acts (called an “anti-crisis shield”) to counteract the economic effects of the coronavirus pandemic [39]. The legislative process is in progress.

By March 29, Poland reported 1862 laboratory-confirmed COVID-19 cases and 22 deaths related to COVID-19 [40]. Globally, more than 600 000 COVID-19 cases and over 30 000 deaths were reported as of March 29, 2020 [40].

Conclusions

In Poland, compared to other European countries, far-reaching solutions were implemented relatively early to reduce the spread of infection. Six days after the first laboratory-confirmed COVID-19 case, all mass events in Poland were banned. All schools and universities were closed 8 days after the first COVID-19 case. After 11 days, significant travel restrictions and the 14 days self-quarantine obligation for travelers were introduced. Due to the ongoing epidemic, it is too early to forecast the impact of the adopted policies on the spread of SARS-CoV-2 in Poland. Further studies should compare the impact of different public health interventions intended to mitigate the spread of coronavirus across the EU countries.

References:

1. Wang C, Horby PW, Hayden FG, Gao GF: A novel coronavirus outbreak of global health concern. *Lancet*, 2020; 395(10223): 470–73
2. European Centre for Disease Prevention and Control. Pneumonia cases possibly associated with a novel coronavirus in Wuhan, China – 9 January 2020. URL: <https://www.ecdc.europa.eu/en/publications-data/pneumonia-cases-possibly-associated-novel-coronavirus-wuhan-china>
3. European Centre for Disease Prevention and Control. Event background COVID-19. URL: <https://www.ecdc.europa.eu/en/novel-coronavirus/event-background-2019>
4. The Chief Sanitary Inspectorate. About the State Sanitary Inspection; URL: <https://gis.gov.pl/en/homepage/>
5. Journal of Laws. Legal acts by year. URL: <http://isap.sejm.gov.pl/isap.nsf/ByYear.xsp?type=WDU&year=2020>
6. The official website of the Republic of Poland. Coronavirus: Information and recommendations. URL: <https://www.gov.pl/web/koronawirus> [in Polish]
7. The Polish Ministry of Health. URL: <https://www.gov.pl/web/zdrowie> [in Polish]
8. The Chief Sanitary Inspectorate. Travel Advisories No. 1, as of January 20, 2020. URL: <https://gis.gov.pl/aktualnosci/komunikat-dla-podrozujacych/> [in Polish]
9. The Chief Sanitary Inspectorate. Statement of the Committee on Epidemiology, Infectious Diseases and Vaccinations developed a definition of suspected COVID-19 case, as of January 22, 2020. URL: <https://gis.gov.pl/aktualnosci/komunikat-glownego-inspektora-sanitarnego-po-posiedzeniu-komisji-epidemiologii-chorob-zakaznych-i-szczepien-ochronnych-z-dnia-22-stycznia-2020-r-w-sprawie-nowego-koronawirusa-2019-ncov-skierowana-do/> [in Polish]
10. Lescure FX, Bouadma L, Nguyen Duc et al: Clinical and virological data of the first cases of COVID-19 in Europe: A case series. *Lancet Infect Dis*, 2020 [Epub ahead of print]
11. The Chief Sanitary Inspectorate. Passengers' Location Card. URL: <https://www.lotnisko-chopina.pl/en/news/0/984/szczegoly.html>
12. The Chief Sanitary Inspectorate. Information of the Chief Sanitary Inspector regarding the state of health of a group of students returning to Poland from Wuhan (China) on January 26, 2020. URL: <https://gis.gov.pl/aktualnosci/informacja-glownego-inspektora-sanitarnego-dotyczaca-stanu-zdrowia-grupy-studentow-powracajacych-do-polski-z-wuhan-chiny-26-stycznia-2020r/> [in Polish]
13. World Health Organization. Novel Coronavirus (2019-nCoV), Situation report – 8, as of January 28, 2020. URL: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200128-sitrep-8-ncov-cleared.pdf?sfvrsn=8b671ce5_2
14. The Chief Sanitary Inspectorate. Information addressed to the persons who undertake international travel from China. URL: https://gis.gov.pl/wp-content/uploads/2020/01/2019_nCoV_ULOTKA_ENG_ver.2.pdf
15. World Health Organization. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Geneva, Switzerland, January 30, 2020. URL: [https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
16. Polish Press Agency. Evacuation of Poles from coronavirus-hit Wuhan underway – dep min. URL: <https://www.pap.pl/node/580946>
17. The Chief Sanitary Inspectorate. Travel Advisories No. 12, as of February 1, 2020. URL: <https://gis.gov.pl/aktualnosci/komunikat-dla-podrozujacych-nr-12-1-lutego-2020-r-opracowano-na-podstawie-danych-ecdc-oraz-who/> [in Polish]
18. European Centre for Disease Prevention and Control. Threat assessment brief: Outbreak of novel coronavirus disease 2019 (COVID-19): Situation in Italy. URL: <https://www.ecdc.europa.eu/en/publications-data/outbreak-novel-coronavirus-disease-2019-covid-19-situation-italy>
19. The Chief Sanitary Inspectorate. Travel Advisories No. 30, as of February 23, 2020. URL: <https://gis.gov.pl/aktualnosci/komunikat-dla-podrozujacych-nr-30-23-lutego-2020-r-opracowano-na-podstawie-danych-ecdc-oraz-who/>
20. Act of March 2, 2020, on special arrangements for the prevention and combating of COVID-19, other infectious diseases and crisis situations caused by them. URL: <http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU2020000374/T/D20200374L.pdf> [in Polish]
21. The Chief Sanitary Inspectorate. Chief Sanitary Inspector's announcement for medical professionals – coronavirus. URL: <https://gis.gov.pl/aktualnosci/komunikat-glownego-inspektora-sanitarnego-dla-profesjonalistow-medycznych/> [in Polish]
22. World Health Organization. Novel Coronavirus (2019-nCoV), Situation report – 44, as of March 04, 2020. URL: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200304-sitrep-44-covid-19.pdf?sfvrsn=93937f92_6
23. Act of 5 December 2008, on preventing and combating infections and infectious diseases among people. URL: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20082341570> [in Polish]
24. Ordinance of the Minister of Health of March 7, 2020 on the list of diseases causing the obligation to quarantine or epidemiological supervision and the period of mandatory quarantine or epidemiological supervision. URL: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000376> [in Polish]
25. World Health Organization. Novel Coronavirus (2019-nCoV), Situation report – 47, as of March 07, 2020. URL: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200307-sitrep-47-covid-19.pdf?sfvrsn=27c364a4_4
26. Polish Radio. Poland to bring in sanitary controls at borders in bid to stave off coronavirus. URL: <https://www.polskieradio.pl/395/7785/Artykul/2470039,Poland-to-bring-in-sanitary-controls-at-borders-in-bid-to-stave-off-coronavirus>
27. World Health Organization. Novel Coronavirus (2019-nCoV), Situation report – 50, as of March 10, 2020. URL: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200310-sitrep-50-covid-19.pdf?sfvrsn=55e904fb_2
28. Ordinance of the Minister of National Education of March 11, 2020 on temporary restriction of the functioning of units of the education system in relation to the prevention and combating of COVID-19. URL: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000410> [in Polish]
29. Ordinance of the Minister of Education and Higher Education of 11 March 2020 on the temporary limitation of the functioning of certain entities of the higher education and science system in relation to the prevention and combating of COVID-19. URL: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000405> [in Polish]
30. Ordinance of the Minister of Culture and National Heritage of March 11, 2020 regarding the temporary limitation of the functioning of artistic universities in relation to the prevention, counteracting and combating of COVID-19. URL: <http://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000403> [in Polish]
31. Ordinance of the Minister of Health of March 13, 2020 regarding the announcement of an epidemic emergency in the territory of the Republic of Poland. URL: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000433> [in Polish]
32. Ordinance of the Minister of the Interior and Administration of March 13, 2020 regarding temporary suspension or limitation of border traffic at specific border crossing points. URL: <http://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000435> [in Polish]
33. Polish Press Agency. Poland will launch mobile app for people under quarantine – president. URL: <https://www.pap.pl/node/608981>
34. Ministry of Digital Affairs. Home Quarantine application – first SMS, then activation. URL: <https://www.gov.pl/web/cyfyzacja/aplikacja-kwarantanna-domowa--najpierw-sms-pozniej-aktywacja> [in Polish]
35. Ordinance of the Council of Ministers of March 14, 2020 amending the regulation on air traffic bans. URL: <http://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000440> [in Polish]
36. LOT Polish Airlines. More than 37,000 persons have returned to Poland thanks to operation #LOTDODOMU. URL: <https://corporate.lot.com/pl/en/press-news?article=2142851>
37. Ordinance of the Minister of Health of March 20, 2020 regarding the announcement of the state of the epidemic in the territory of the Republic of Poland. URL: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000491> [in Polish]
38. Ordinance of the Minister of Health of 24 March 2020 amending the ordinance on announcing the status of the epidemic in the territory of the Republic of Poland. URL: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20200000522> [in Polish]
39. Polish Press Agency. Poland launches economic package to counter virus effect. URL: <https://www.pap.pl/en/news/news%2C608264%2Cpoland-launches-economic-package-counter-virus-effect.html>
40. World Health Organization. Novel Coronavirus (2019-nCoV), Situation report – 70, as of March 30, 2020. URL: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200330-sitrep-70-covid-19.pdf?sfvrsn=7e0fe3f8_2