

# COVID-19: repercussions of nursing, structuring and resolutivity of national health systems



*COVID-19: repercussões para enfermagem, estruturação e resolutividade de sistemas nacionais de saúde*

*COVID-19: repercusiones para la enfermería, estructuración y resolutividad de sistemas nacionales de salud*

Adriana Roese Ramos<sup>a</sup>

Carla Garcia Bottega<sup>b</sup>

Letícia Lassen Petersen<sup>c</sup>

Rosane Machado Rollo<sup>d</sup>

Mariana Kliemann Marchioro<sup>e</sup>

Cristianne Maria Famer Rocha<sup>a</sup>

## How to cite this article:

Ramos AR, Bottega CG, Petersen LL, Rollo RM, Marchioro MK, Rocha CMF. COVID-19: repercussions of nursing, structuring and resolutivity of national health systems. Rev Gaúcha Enferm. 2021;42(spe):e20200332. doi: <https://doi.org/10.1590/1983-1447.2021.20200332>

## ABSTRACT

**Aim:** To analyze the repercussions of Nursing, the structuring and resolution of National Health Systems in facing the new coronavirus (SARS-CoV-2) in selected countries.

**Method:** Reflection article on the confrontation of COVID-19 by the National Health Systems of China, United States of America, Italy, United Kingdom, Portugal, Cuba and Brazil, from information disseminated in different media and in the literature.

**Results:** The response of health systems depended more on political decisions than on their structuring and organization. Nursing, being the front line, was the profession most affected in number of cases and deaths.

**Final Considerations:** The reflection shows that the countries' economic and political issues interfered in the response to COVID-19 and what the role played by Nursing is essential in the front line to face the pandemic.

**Keywords:** Coronavirus infections. Pandemics. Health systems. Nursing.

## RESUMO

**Objetivo:** Analisar as repercussões para a Enfermagem, a estruturação e a resolutividade de Sistemas Nacionais de Saúde no enfrentamento do novo coronavírus (SARS-CoV-2) em países selecionados.

**Método:** Artigo de reflexão sobre o enfrentamento da COVID-19 pelos Sistemas Nacionais de Saúde da China, Estados Unidos da América, Itália, Reino Unido, Portugal, Cuba e Brasil, a partir de informações divulgadas em diferentes meios e na literatura.

**Resultados:** A resposta dos sistemas de saúde dependeu mais de decisões políticas do que da estruturação e organização dos mesmos. A Enfermagem, por ser linha de frente, foi a profissão mais atingida em número de casos e óbitos.

**Considerações Finais:** A reflexão demonstra que questões econômicas e políticas dos países interferiram na resposta à COVID-19 e o que o papel exercido pela Enfermagem é essencial na linha de frente ao enfrentamento da pandemia.

**Palavras-chave:** Infecções por Coronavírus. Pandemias. Sistemas de saúde. Enfermagem.

## RESUMEN

**Objetivo:** Analizar las repercusiones para la Enfermería, la estructuración y resolución de Sistemas Nacionales de Salud ante el nuevo coronavirus (SARS-CoV-2) en países seleccionados.

**Método:** Artículo de reflexión sobre el enfrentamiento del COVID-19 por parte de los Sistemas Nacionales de Salud de China, Estados Unidos de América, Italia, Reino Unido, Portugal, Cuba y Brasil, a partir de información difundida en diferentes medios y en la literatura.

**Resultados:** La respuesta de los sistemas de salud dependió más de decisiones políticas que de su estructuración y organización. La enfermería, al ser la primera línea, fue la profesión más afectada en número de casos y muertes.

**Consideraciones Finales:** La reflexión muestra que los problemas económicos y políticos de los países interfirieron en la respuesta a COVID-19 y cuál es el papel que juega la Enfermería en primera línea para enfrentar la pandemia.

**Palabras clave:** Infecciones por coronavirus. Pandemias. Sistemas de salud. Enfermería.

<sup>a</sup> Universidade Federal do Rio Grande do Sul (UFRGS), Escola de Enfermagem. Porto Alegre, Rio Grande do Sul, Brasil.

<sup>b</sup> Universidade Estadual do Rio Grande do Sul (UERGS), Campus Central Porto Alegre. Porto Alegre, Rio Grande do Sul, Brasil.

<sup>c</sup> Fundação Educacional Machado de Assis (FEMA). Santa Rosa, Rio Grande do Sul, Brasil.

<sup>d</sup> Universidade Federal do Rio Grande do Sul (UFRGS), Faculdade de Educação. Porto Alegre, Rio Grande do Sul, Brasil.

<sup>e</sup> Secretaria de Estado da Saúde de Santa Catarina (SES/SC), Diretoria de Assistência Farmacêutica. Florianópolis, Santa Catarina, Brasil.

## INTRODUCTION

The first cases of COVID-19, acute respiratory syndrome caused by the novel coronavirus (SARS-CoV-2), were reported in the city of Wuhan city, province of Hubei, China, at the end of 2019. On March 11, 2020, COVID-19 was characterized by the World Health Organization (WHO) as a pandemic<sup>(1-2)</sup>.

The increasing number of infected individuals, the severity of the acute condition of the disease, the absence of specific drugs and/or vaccine, the pandemic status, and the increasing number of deaths demanded a rapid response from governments and national health systems around the world, especially in relation to social distancing measures, testing for the virus, availability of intensive care beds with respirators, universal health coverage, health education, surveillance, and financial aid<sup>(3-5)</sup>.

These measures were taken differently by different countries based on knowledge of the disease, WHO guidelines, installed capacity, characteristics of health systems, and government decisions. With the aim of understanding the strategies adopted by the world's main health care systems, this article analyzes some measures in the fight against COVID-19 based on the responses of these systems in the United States of America (USA), Italy, the United Kingdom (UK), and Brazil, which are countries with the highest number of cases and deaths worldwide at different stages of the pandemic; Portugal and Cuba, which were relatively successful in controlling the disease, with a very small number of cases and fatalities; and China, the source of the virus.

When analyzing health systems, it is important to refer to the role of nurses, especially in the year of the Brazilian Nursing Now campaign. Nursing professionals are globally recognized as health workers at the forefront of care in the pandemic and as those who first come into contact with symptomatic users. In this biological war that the world is experiencing, world health agencies stress the need for care in all its dimensions, whether family-related, social, economic, political, physical, spiritual or emotional<sup>(6)</sup>. Nursing is the largest health care profession and it is essential for health preservation, case assessment, and the provision of 24-hour care; moreover, nursing professionals work with other health workers in all care-related areas.

The main points analyzed in this reflection article were the structure/organization of the national health systems (NHS), funding, measures taken to cope with COVID-19, the problem-solving capacity of these measures, system response, and the repercussions for nurses at the forefront of the care during the pandemic. These analyses were based

on the thoughts of the authors, debates divulged in the media (scientific journals, mainstream media, and official websites), and the literature.

Thus, the aim of this article is to analyze the repercussions for nursing and the structuring and problem-solving capacity of the national health systems in the fight against the novel coronavirus (SARS-CoV-2) in selected countries.

## HEALTH SYSTEMS AND COPING WITH THE PANDEMIC

The novel coronavirus was first detected in the city of Wuhan (China), apparently at a food market that sells live animals for human consumption<sup>(2)</sup>. It was also suspected that the virus had been created in a laboratory, but the thesis was refuted in an article published in the scientific journal *Nature Medicine*<sup>(1)</sup>. The Chinese health care system was created in 1949 to guarantee access to health care to the population. In 2011, China enacted the social security law and organized the health system and local, provincial, regional, municipal, and district government administration. Health care is provided in the form of primary care, specialized public health care, and curative care<sup>(7)</sup>. Moreover, health care is funded through tripartite contribution (individual, employer, and government), which resulted in a fragmented and high-cost system. China targets comprehensive care and foresees the expansion of coverage by the end of 2020<sup>(8)</sup>.

Given the need to respond rapidly to COVID-19, some of the most severe measures adopted by the Chinese government were control the movement of people and isolate the epicenter of the disease, closely followed by restriction on air travel, quarantine in entire cities, and the closure of non-essential services. Based on the first cases in Wuhan, experts realized that cases spread according to the mobility of people. With the control measures, the correlation changed and fell drastically, proving that restricting mobility was effective. Furthermore, increased testing and rapid isolation of suspected and confirmed cases and contacts demonstrated that the combined interventions reduced the spread and transmission of the disease. These prevention and control measures can be divided into three stages. In the first stage, at the start of the outbreak, the focus was on preventing all cases from leaving Wuhan. The second stage involved reducing intensity of the epidemic and prevent an increase in cases (January 23, 835 cases and 25 deaths reported in one day). The third stage consisted of control and prevention, as well as giving priority to treating patients and interrupting transmission (March 07, 44 cases in one day and 3,070 deaths in total).

China planned a response for general practitioners in primary care that consisted of health education and interventions with local neighborhood associations; monitoring confirmed cases; screening, tracking, and investigation of sources of infection; instant messaging to the community; electronic billboards to divulge information; use of volunteers; online prescriptions; assistance in specialized outpatient clinics; patient monitoring; support for families and neighbors; and referrals to hospitals after primary care had been exhausted<sup>(9)</sup>. Moreover, China has three nurses for every one thousand inhabitants and encourages the training of new professionals. Many Chinese nurses were contaminated due to the lack of adequate protection at beginning of the disease and face long working hours to fight COVID-19, resulting in burnout. By the end of April, 23 nurses had died in China.

Italy was one of the epicenters of the pandemic and the first case was recorded at the end of January. Since then, the Italian national health service (SSN – *Servizio Sanitario Nazionale*) came close to collapse due to the increased number of cases, especially in the northern region of the country<sup>(9)</sup>. The Italian National Health Service Law was passed in 1978, after an important public health movement. The fundamental principles of the NHS are universal right, equality, and justice. In addition, the legal principles are universal access, decentralized care, and democratic management<sup>(10-11)</sup>. In recent decades, however, increasing demand and health costs have led governments to implement cost-reduction reforms (social participation/counterpart in funding and private health care). Although the commitment to guarantee the universal right to health care was maintained in Italy, the reforms seem to have weakened the system and its commitment to this right by making it less fair and more limited and exclusionary<sup>(11)</sup>, as in the case of the co-pay fee called “ticket” for certain health services and non-emergency care.

With regard to the novel coronavirus in Italy, the government initially resisted the need to adopt containment or mitigation measures, which contributed to the rapid spread of the virus. Another issue was that the first infected cases were discovered and treated in hospitals without isolation measures, thus creating the ideal scenario for contagion. Moreover, Italy has a high number of elderly people (23% of the population is 65 years old or older) and one of the risk groups of COVID-19. In addition, it is believed that the disease had already been circulating long before it was discovered. Despite its qualities, the Italian NHS has had difficulties dealing with the coronavirus, which may be a reflection of lower public investments in national health care. The situation in Italy became critical in the second half of March when there was a shortage of respirators and beds,

forcing physicians to choose which lives they would save. In March, the government adopted tougher measures such as stricter nationwide quarantine. People needed permission to leave their homes and anyone who violated the rule had to pay a fine. Other emergency measures initially included enhanced national coordination, followed by training and more flexible funding of health systems to cover emergencies. Subsequently, partnerships were institutionalized between the public and private sector. Moreover, the telemedicine service was extended to people in isolation or quarantine and pharmacies were connected to telemedicine systems to facilitate access to medication during the pandemic<sup>(9)</sup>. Nursing professionals in Italy went from heroes to neglected workers in two months and many lives were lost. By May, 35 deaths of nursing professionals had already been recorded and many professionals were infected, especially in the initial phase in which safety measures were not taken.

The United Kingdom is also among the most impacted European countries in number of infected cases and deaths by COVID-19. The UK National Health Service (NHS), established in 1948, is considered a world reference in terms of universal coverage, funding, structure, and regionalized supply. The NHS guarantees the right to universal and public access to health care. Care is provided at two levels and starts with primary care, which is the gateway to the system and requires users to have consulted with a general practitioner who, if necessary refers them to specialized and hospital care<sup>(10,12)</sup>. Nursing is considered highly reliable by the UK population. In the country of birth of Florence Nightingale, who is revered as the founder of modern nursing, the field hospitals built to fight the pandemic of the novel coronavirus were named Nightingale in honor of Florence and her history.

The high infection and death rates for COVID-19 in the UK can be attributed to several factors, such as Europe's underestimation of the virus because of distance; interventions that sought to achieve herd immunity, while social distancing was only enforced after 500 deaths and 5 million confirmed cases; delays in the start of testing and the criteria for its implementation that hindered a correct understanding of the extent of this disease and enabled transmission by asymptomatic individuals and rapid spread; lack of personal protective equipment (PPE), especially among health care workers worldwide; high rate of immigration; high population density and age profile, as 18% of the population is over 65 years old; and the sub estimation of data, as not all of the patients who eventually died were tested for COVID-19. However, the quality and universal nature of the NHS certainly contributed to mitigating the damaging effects of the disease. In January 2021, the number of deaths

from the disease totaled 78,000 in the UK. A study released by Amnesty International in September 2020 reported 649 deaths of UK health workers at the forefront of care in the fight against the pandemic.

During the pandemic, remote screening and monitoring (telephone) services were provided in the UK, and nurses played a huge role in this stage, during which nursing professionals were recruited and called from retirement to continue working remotely or in person. In 2018, the United Kingdom had 517,200 nursing professionals and 31,500 obstetric nurses, according to WHO data.

In Portugal, on the other hand, the discipline to adopt social distancing measures seems to have been critical in controlling the number of cases and deaths from COVID-19. Portugal quickly made precautionary public health decisions and had time to prepare and organize contingency plans by observing how the disease progressed in other European countries. The state of alert and closure of schools was also decreed early in the pandemic. Another relevant issue was the role of national authorities, who posted warnings in social media to increase awareness and make recommendations, rather than use control or fines. Moreover, the politicians were united in the crisis and the parties joined forces to face a common problem. These factors resulted in a good assessment of Portugal in the pandemic. Nursing professionals were fundamental in terms of care and interventions since they enhanced the communication system and organized the service network. According to the Order of Nurses, Portugal has around 78,000 nurses, of which 46,000 work actively in the NHS. However, due to the pandemic, the Order lost nursing professionals to other European countries such as the United Kingdom, Spain, Germany, and the Netherlands because these countries offered better working conditions.

The Portuguese NHS launched in 1979 constitutionally guarantees universal access to care and health care protection as a right and decentralizes administration through health regions. In 1989, a "small" amendment was made to the text that proved highly critical to the population since the system went from "free" to "tendentially free". Restrictions to government spending had increased the influence of the private sector on the health system over the years. Another factor was the inclusion of moderate rates to access some health care services to all users, except at-risk and poorer groups<sup>(10,13)</sup>.

Although the analyzed European countries responded differently to the pandemic, the fiscal austerity policy adopted in these countries undermined the right to health care and, in the current public health crisis, increased exposure to risks associated with economic and social vulnerabilities.

In the USA, the health protection model comprises private funding and individual care<sup>(10)</sup>. Although the USA has

two public programs, namely Medicaid for very poor people (social welfare) and Medicare for the elderly (social security), most of the population has individually individual health care coverage contracted through private health insurance<sup>(10)</sup>. Notably, the USA is a world leader in health care expenditure both in percentage and in total values. However, the public health system falls behind in terms of coverage since a considerable portion of the population does not have access to any health care service and inequalities exist even among the formally insured population<sup>(14)</sup>.

According to the WHO, the USA has ranked number one in terms of COVID-19 morbidity and mortality statistics since mid-April. Among other factors, this situation is caused by the government delayed response (around a month) and underestimation of the risk of the virus, followed by failure to coordinate joint actions to fight the pandemic and the relegation of governors and mayors to isolated actions. Thus, failure to foresee the dimension of the disease and the underreporting of COVID-19 cases and deaths explain the complex scenario. The USA did not report the deaths that occurred at home, around 200 per day, and limited access to tests to confirm the disease. Another factor that should be highlighted is the censorship and reprisal suffered by nursing professionals when they publicly exposed their working conditions. Of the main measures taken to control COVID-19, we can highlight: (a) organization of Medicare and Medicaid for the insured; (b) isolation of contacts and confirmed cases based on testing; (c) provision of emergency and emergency services paid for by users; and, (d) support from state/local government agencies and partner organizations<sup>(14)</sup>.

In relation to the nursing workforce, the USA has more than four million nurses. However, as in other countries, the US press reported a shortage of professionals, especially due to the average advanced age of nurses, the fact that most of them work in hospitals (with more strenuous working hours), a worsening of the situation, and the increase in the number of COVID-19 cases.

Another NHS that deserves analysis is the system in Cuba, which has a small number of cases and deaths from COVID-19. The Cuban NHS originated from the post-revolution transformations and achievements in the transition to socialism, after 1960. Health in Cuba is a free, unique, and inalienable social right with central management, universal coverage, and exclusively public financing and providers. Its principles are intersectionality, accessibility, gratuitousness, normative centralization and executive decentralization, social and state-based, community participation, prophylactic orientation, proper application of scientific advances, and international collaboration. In this last principle, diplomatic-public health cooperation should be highlighted and involves sending

health workers (especially physicians) to work in other countries, including in the fight against COVID-19. In addition, the Family Doctor and Nurse Program (PMEF, *Programa Médico e Enfermeira de Família*), which is a care model implemented in 1984 for the individual, family, and community, is considered an innovation that achieved the goal “Health for all by the year 2000” before this year and placed Cuba in the global stage as the world medical power<sup>(15)</sup>.

The PMEF as the organizer of the health network strengthens the joint work of general practitioners and family nurses, thus reinforcing their importance in the prevention, monitoring, and control of the disease. Nurses are at the forefront in all three levels of care since they individually or collectively promote health by preventing and providing prevention guidelines, actively search for symptomatic individuals and their contacts through georeferencing, and provide patient care.

The low number of COVID-19 cases in Cuba can be explained by its geographical and population specificity and quality of the health system, as well as the creation of a COVID-19 control and prevention plan, in January 2020, when the island did not yet have any cases of the disease. This plan enabled the organization of strategies to strengthen epidemiological monitoring, intensify medical assistance in care units with suspected cases, and training of public health teams for the diagnosis and care of coronavirus cases. Other measures included awareness campaigns to keep people informed, border health control, assistance for vulnerable populations, certification of facilities, and production of inputs.

This range of COVID-19 control measures based on a management model with epidemiological, social, and scientific components in a rigorous statistical information system with the support of political and mass organizations and participation of society resulted in minimal viral circulation and low lethality of infection without overburdening the health system, as occupation did not exceed 29% of intensive care beds. This also positively impacted the health of health workers, and only three deaths of nursing professionals were recorded by the end of October 2020.

The last country analyzed in this article is Brazil, which has the Unified Health System (SUS, *Sistema Único de Saúde*) and has one of the best health inspection strategies in the world, which should have, in thesis, prepared Brazil more effectively for the arrival of COVID-19. This scenario and health guidelines initially adopted by the Ministry of Health, such as social distancing measures, initially prevented the collapse of the health system, especially in terms of shortage of intensive care beds, as seen in other countries. The SUS

provides for the right to health care since the Federal Constitution of 1988, both for Brazilians and foreigners. The system is based on the guidelines and organizational principles of universal access, comprehensiveness, and equitability with social participation, and it is decentralized, hierarchized and regionalized. The system is funded by tax and it is solidary among the three federated entities. Moreover, it has always been underfunded and neglected.

As in other countries, cases in Brazil were underreporting due to lack of tests and delays in testing and results until the middle of 2020, which may explain the speed of contagion. Another issue is the fact that China is the world's leading supplier of inputs and equipment. Since China was in quarantine, it took around four months to provide the other countries with the requested inputs. In addition, competition under unequal conditions existed in the medical inputs market.

The SUS was already experiencing a shortage of health workers well before the pandemic. With the increase in the number of cases of the disease and dismissals of health workers, the system was overburdened, especially in the areas of medicine and nursing. It should be noted that nursing professionals were infected and lost their lives most frequently in their professional practice. According to the WHO, Brazil has 558,177 nurses and, according to information from the Nursing Observatory of the Federal Nursing Council (*Observatório de Enfermagem do Conselho Federal de Enfermagem*), as of February 22, 2021, 48,563 cases (25,304 confirmed) and 582 deaths (546 confirmed) of COVID-19 were reported among Brazilian nursing professionals, resulting in 2.09% fatalities among confirmed data<sup>(16)</sup>.

Irregular adherence to social distancing, unrestricted circulation of people on holidays, announcements of greater future flexibility, and fake news and promises of miraculous cures were and continue to be the reasons that prevented the Brazilian population from fully understanding the need to follow the necessary measures in the pandemic. In addition to these factors, some government authorities minimized the risks, which undermined compliance with the correct guidelines among the population and limited coordination among institutions. In the specific case of Brazil, difficulties managing the crisis, the constant switching of health ministers and the need to maintain an interim minister for more than three months weakened decision-making, politicized COVID-19, and created constant tension between the economy and health.

One more relevant issue in Brazil is regional differences that cause the uneven distribution of high complexity health services and professionals among states and municipalities. Moreover, COVID-19 revealed that some specific regions and

large cities concentrate their resources on health care. The organizational heterogeneity of local systems and limited use of the capillary primary care network only increased the difficulties faced<sup>(9)</sup>. One inference regarding these particularities is that if Brazil had enforced quarantine at the beginning of the pandemic, it may have prevented the disease from spreading. It is also important to consider the positive points of pandemic control in Brazil. The states and municipalities had organized health inspection and made quick decisions, such as the development of COVID-19 monitoring protocols. Moreover, proposals for in-service training, which was then immediately established and organized to support health workers, were essential in these decisions. The learning was critical to enhance solidarity and empathy towards others and their needs. Furthermore, the different institutions contributed to the preparation of inputs to support care management.

### ■ COVID-19 AND THE FUTURE OF POLICIES IN NATIONAL STATES: AS FINAL CONSIDERATIONS

The tragedy caused by the pandemic reveals two lines of thought on the future: one from the individual viewpoint and another from the collective viewpoint. From the individual perspective, the fight against COVID-19 will certainly transform habits and routines. Changes will not be the same among individuals, but they will demand reflection on the requirements of social protection provided by the states that must be included in the political agenda.

Learning about the structure of health systems and the measures and interventions of each country can support the adoption of political management strategies to protect the population nationwide. The future of public organization and provision of health care services, collectively, after the pandemic, requires a territorial outlook. Thus, strengthening social security, reinstating the right to life as the main agenda to guide political actions and choices are requirements that the fight against COVID-19 will teach those who are willing to learn, in addition to all the suffering experienced.

Similarly, the consolidation of a universal health system associated with measures that strengthen health inspection seems to reinforce and enable a commitment to comprehensive health care. The fight against the pandemic has certainly highlighted the need to structure and adapt services and the possible use of science and technology for these purposes. In contrast, the use of models to self-finance the population's health needs may prevent access to basic life protection measures.

In critical scenarios, due to the pandemic and during the daily routine of medical services, it is essential to create

and propose a political-economic-health agenda that takes into account increased investments in infrastructure, professional training and qualification, research and production of technology and inputs, and stronger health control and social security, among other requirements. The allocation of resources for these purposes should also be given priority and requires planning and agreements for the adequate provision of care nationwide, as well as serious political interest and commitment to social interests.

In the selected countries, nursing, which is a predominantly female profession and the largest cohort of health care professionals in the world, has been subjected to work overload, burnout, leaves, uncertainties regarding the disease (infection, death of workers and family members, possible transmission, post-traumatic stress disorder, and suicide), the proximity of death, lack of structure and materials, and all the challenges posed by the disease. Moreover, the contributions of nursing professionals in the health systems and at the forefront of care during the pandemic become increasingly evident. The Nursing Now campaign announced for the year 2020 and extended until June 2021, demonstrates the need to value and empower nursing professionals.

### ■ REFERENCES

1. Andersen KG, Rambaut A, Lipkin WI, Holmes EC, Garry RF. The proximal origin of SARS-CoV-2. *Nat Med.* 2020;26(4):450-2. doi: <https://doi.org/10.1038/s41591-020-0820-9>
2. Wang H, Li X, Li T, Zhang S, Wang L, Wu X et al. The genetic sequence, origin, and diagnosis of SARS-CoV-2. *Eur J Clin Microbiol Infect Dis.* 2020;39(9):1629-35 doi: <https://doi.org/10.1007/s10096-020-03899-4>
3. The Lancet Public Health. COVID-19 puts societies to the test [editorial]. *Lancet Public Health.* 2020;5(5):e235. doi: [https://doi.org/10.1016/S2468-2667\(20\)30097-9](https://doi.org/10.1016/S2468-2667(20)30097-9)
4. Paakkari L, Okan O. COVID-19: health literacy is an underestimated problem [comment]. *Lancet Public Health.* 2020 May; 5(5):e249-e250. doi: [https://doi.org/10.1016/S2468-2667\(20\)30086-4](https://doi.org/10.1016/S2468-2667(20)30086-4)
5. Cowling JB, Ali ST, Ng TWY, Tsang TK, Li JCM, Fong MW et al. Impact assessment of non-pharmaceutical interventions against coronavirus disease 2019 and influenza in Hong Kong: an observational study. *Lancet Public Health.* 2020;5(5):e279-e288. doi: [https://doi.org/10.1016/S2468-2667\(20\)30090-6](https://doi.org/10.1016/S2468-2667(20)30090-6)
6. Backes MTS, Carvalho KM, Santos EKA, Backes DE. New coronavirus: what does nursing have to learn and teach in times of a pandemic? *Rev Bras Enferm.* 2020;73(Suppl. 2):e20200259. doi: <https://doi.org/10.1590/0034-7167-2020-0259>
7. Darvenne M. Brasil e China: cooperação em saúde e perspectivas. In: *Saúde e Política Externa: os 20 anos da Assessoria de Assuntos Internacionais de Saúde (1998-2018)*. Brasília (DF): Ministério da Saúde, 2018 [cited 2020 Jul 12]. p. 165-83. Available from: [http://bvsm.sau.gov.br/bvs/publicacoes/saude\\_politica\\_externa\\_20\\_anos\\_aisa.pdf](http://bvsm.sau.gov.br/bvs/publicacoes/saude_politica_externa_20_anos_aisa.pdf)
8. Silva AI. Chinese healthcare policy: the occidental European influence on the restructuring after 1978. *Saúde Soc.* 2015;24(3):1006-20. doi: <https://doi.org/10.1590/S0104-12902015133984>

9. Prado NMB, Rossi TRA, Chaves SCL, Barros SG, Magno L, Santos HLPC et al. The international response of primary health care to COVID-19: document analysis in selected countries. *Cad Saúde Pública*. 2020;36(12):e00183820. doi: <https://doi.org/10.1590/0102-311X00183820>
10. Lobato LVC, Giovanella L. Sistemas de Saúde: origens, componentes e dinâmica. In: Giovanella L, Escorel S, Lobato LVC, Noronha JC, Carvalho AI, organizadores. *Políticas e Sistemas de Saúde no Brasil*. 2. ed. Rio de Janeiro: Editora Fiocruz; 2012. p. 89-120.
11. Lima RCGS, Severo DO, Verdi MIM, Da Ros MAA. The construction of the right to health in Italy and in Brazil under the perspective of everyday bioethics. *Saude Soc*. 2009;18(1):118-30. doi: <https://doi.org/10.1590/S0104-12902009000100012>
12. Giovanella L, Mendoza-Ruiz A, Pilar ACA, Rosa MC, Martins GB, Santos IS, et al. Universal health system and universal health coverage: assumptions and strategies. *Ciênc Saúde Coletiva*. 2018;23(6):1763-76. doi: <https://doi.org/10.1590/1413-81232018236.05562018>
13. Castro YQ, Rosa WM. O direito à saúde em Portugal no período da crise. *Rev Fac Direito UFRGS*. 2018 [cited 2020 Jul 12];(39):134-51. Available from: <https://seer.ufrgs.br/revfacdir/article/view/83696>
14. Noronha JC, Ugá MAD. O sistema de saúde dos Estados Unidos. In: Buss PM, Labra ME, organizadores. *Sistemas de saúde: continuidades e mudanças*. Rio de Janeiro: Editora Fiocruz; 1995 [cited 2020 jul 10]. p. 177-218. Available from: <http://books.scielo.org/id/zngyg/pdf/buss-9788575414026-06.pdf>
15. Mesquita MO, Roesse A, Rocha CMF, Mello VR, Pasini VL. Vivências de uma equipe multiprofissional na atenção primária em saúde em La Habana, Cuba. *Rev Extensão UFRGS*. 2015 [citado 2020 jul 05];11:40-6. Available from: <https://lume.ufrgs.br/bitstream/handle/10183/206991/000976283.pdf?sequence=1&isAllowed=y>
16. Conselho Federal de Enfermagem (BR). Observatório de enfermagem. Profissionais infectados com COVID-19 informado pelo serviço de saúde [Internet]. Brasília (DF): Conselho Federal de Enfermagem, 2021 [cited 2021 Feb 22]. Available from: <http://observatoriodaenfermagem.cofen.gov.br/>

#### ■ Authorship contribution:

Adriana Roesse Ramos: all stages, from the conceptualization of the research project to revision and editing of the article.

Cristianne Maria Famer Rocha and Carla Garcia Bottega: formal analysis, methodology, supervision, visualization, writing of the original draft, review, and editing.

Letícia Lassen Petersen, Rosane Machado Rollo and Mariana Kliemann Marchioro: formal analysis and writing of the original draft.

The authors declare that there is no conflict of interest.

#### ■ Corresponding author:

Adriana Roesse Ramos  
E-mail: [adiroese@gmail.com](mailto:adiroese@gmail.com)

Received: 08.15.2020  
Approved: 02.26.2021

#### Associate editor:

Dagmar Elaine Kaiser

#### Editor-in-chief:

Maria da Graça Oliveira Crossetti