Covid-19 and the health system in the United States and Brazil: reality, challenges and the most impacted social groups

Covid-19 e os sistemas de saúde dos Estados Unidos e do Brasil: realidade, desafios e grupos sociais mais impactados

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ABSTRACT
Object: Responses to Covid-19 Pandemic in Brazil and the United States, in the context of the health systems of these countries. Objective: Compare and evaluate American and Brazilian health systems and governmental actions during the first six months of Covid-19 pandemic. Method: We evaluated secondary data from the census, health systems, literature and scientific newspaper materials. Results: The health systems of both countries are designed to serve different purposes and this reflected strongly in their ability to tackle pandemic. The American system has an exclusive nature that is revealed when analyzing the population accessing each type of health service. On the other hand, the Brazilian system is more inclusive however it lacks government support to perform at this time. Conclusion: In the USA, access to the health system is exclusive, nonetheless there were adjustments made to social policies during this critical period to support the population. In Brazil, access is free through the Unified Health System (SUS), despite being plagued with substantial budget reductions and political disorders, hindering the control of the pandemic. Both governments should adjust their health systems and invest in protective measures for the most vulnerable citizens.

Keywords: Health systems comparison, Covid-19 pandemic, Equity in health, Vulnerability, Public Health.

RESUMO
Objeto: Respostas a Pandemia de Covid-19 no Brasil e nos Estados Unidos, no âmbito dos sistemas de saúde destes países. Objetivo: Comparar e avaliar os sistemas de saúde e as ações governamentais americanos e brasileiros durante a pandemia da Covid-19. Método: Avaliamos dados secundários dos censos, sistemas de saúde, literatura de jornais e revistas cientificas. Resultados: os sistemas de saúde de ambos os países são projetados para servir a propósitos

diferentes e isso se reflete fortemente em sua capacidade de enfrentar a pandemia. O sistema americano tem um caráter exclusivo que se revela ao se analisar a população que acessa cada tipo de serviço de saúde. Por outro lado, o sistema brasileiro é mais inclusivo, porém carece de apoio governamental para atuar neste momento. Conclusão: Nos Estados Unidos, o acesso ao sistema de saúde é exclusivo, porém houve ajustes nas políticas sociais neste período crítico de apoio à população. No Brasil, o acesso é gratuito por meio do Sistema Único de Saúde (SUS), apesar de sofrer grandes reduções orçamentárias e desordens políticas, dificultando o controle da pandemia. Ambos os governos deveriam ajustar seus sistemas de saúde, e investir em medidas de proteção aos cidadãos mais vulneráveis.

Palavras-chave: Comparação de Sistemas de Saúde, Pandemia da Covid-19, Equidade em saúde, Vulnerabilidade, Saúde Pública.

1 INTRODUCTION

Since January 2020, news about the SARS-CoV-2 virus, a novel virus that causes 2019 Coronavirus Infectious Disease (Covid-19) has spread faster than the virus itself. Investigations showed that the outbreak (many cases of a disease in a single location) started in December 2019 in the city of Wuhan, in the province of Hubei, China[1]. The new disease quickly reached the dimension of epidemic (when several cases of a given disease occur in several places simultaneously) in February. On March 11, 2020, the World Health Organization (WHO) declared the condition of pandemic, which is an epidemic that spreads over a large geographic region, continents or around the world[2].

Humanity is facing a complicated scenario of global public health, an acute one for each affected country, as this article will illustrate in the case of United States of America (USA) and Brazil. An epidemic not only impacts the people contaminated by the disease, but also causes disorders in the health systems, the socio-economic and political structures of the regions where it occurs[3].

In the face of a pandemic, all efforts must be directed to prevent further contamination and also not to overload health systems that need to maintain the normal operation of existing services[4]. Thus, we witnessed, simultaneously, the scientific community united to find ways to fight the virus, identifying its genetic sequencing in record time, searching for treatments and vaccines, as well as the countless political, social and economic challenges arising in countries experiencing the pandemic reality. New information about Covid-19 was emerging continuously[5].

Minding this article was written during the month of August 2020, one should note that all scenarios related to health systems could change at any time due to the evolving socio-economic policies.

2 METHOD

We assessed the most important points that differentiate health systems in the United States and in Brazil, using data from articles, the media, the census and official health systems resolutions. We considered issues related to these systems whether they favor the control of the pandemic caused by SARS-CoV-2, or end up hampering the actions aimed to serve both populations.

The questions that guided this work were: what are the main differences in the health systems? What challenges have been raised with Covid-19 for these health systems? Will there be population groups more impacted by the arrival of a new disease in the epidemiological reality of these countries?

3 RESULTS

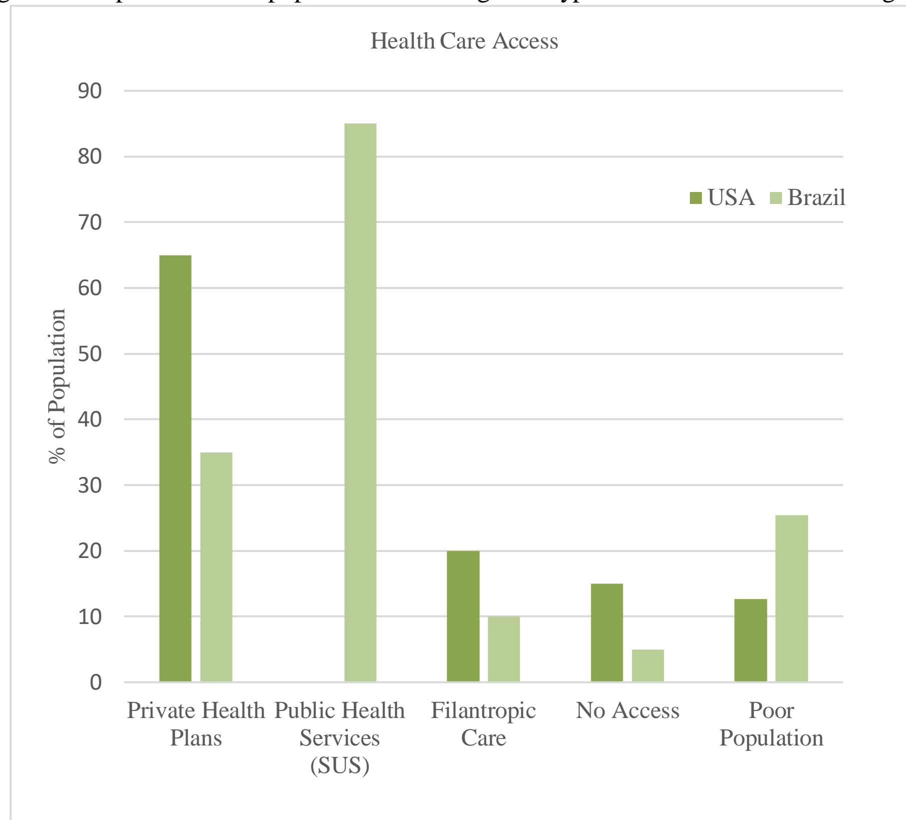
HEALTH SYSTEMS IN THE UNITED STATES AND BRAZIL

We point out that the two nations accounted for their first positive cases for Covid-19 within a few days' interval in February 2020, and entered into a situation of alert simultaneously. In April, the death toll in the USA exceeded the number of casualties recorded during all recent wars in its history. In Brazil, the number of victims of the new virus was approximately doubling daily, without real dimensioning due to flaws in the case records and the lack of tests throughout the territory [5,6]. Currently, Brazil has 4.597.815 reported cases and 138.210 deaths[7] and in the USA 7,105,225 cases and 205,826 deaths[8]. Data recorded as of September 22, 2020.

The two countries have well-marked differences in their health systems: the American one is essentially private, with some university hospitals of hybrid sponsorship between philanthropic and governmental, whereas Brazil can count on the Unified Health System (SUS), which also regulates the private sector [9 10]. The USA is known as a rich and developed country and Brazil is considered an emerging country, which, in recent years, has returned to the level of under-development. Currently, the two countries are plagued with the increase of unemployment and poverty.

Health systems in the USA and Brazil have different backgrounds and purposes, and this is reflected in the population's access to health services – see Figure 1. The basic identity of the formation of each system and its operation directly impact the possibility of controlling various diseases, the quality of life of the population, and even the welfare of families[11, 12].

Figure 1: Proportion of the population accessing each type of health service and living in poverty.



Fonte: Autores 2020. Gráfico criado com dados analisados das seguintes fontes: Berchick ER, Barnett JC, Upton RD. Health Insurance Coverage in the United States: 2018; Report number P60-267 (RV); Census Bureau, USA: November, 2019; Ministerio da Saude do Brasil; Programa Nacional de Amostragem por Domicilio/IBGE.

In the United States, around 65% of the population has access to private health insurance, with strong control of use and coverage, while 20% solely get access to mixed medical services with individual and governmental co-participation, Medicaid (Government-funded program for children, pregnant women and low-income people) and Medicare (Government-funded program for seniors over 65 and people with disabilities), philanthropic help through University Hospitals, churches and benevolent associations actions, assistance from Doctors Without Borders etc. but without guaranteed universal and cost-free access.

Even though, about 15% of the population remains without any access to health services, for being unable to pay for a medical plan or insurance, or not qualifying to be attended by mixed or philanthropic programs. There is no free health insurance for American citizens, with sole exception for low-income children and pregnant women [9, 10, 13].

Access to the US health care system is facilitated according to how much one can pay for it, being considered a privilege and not a right. That is, whoever has health insurance and can pay for prompt assistance in emergency situations, can guarantee better life condition[9]. In case of

emergency, intervention in the shortest possible time is what will guarantee the effectiveness of the treatment and influence the mortality rate.

Even those who have insurance coverage for health care pay dearly when they individually contract their coverage or have significant discount from their salaries if the insurance contract is made through the employer. However, all count on the payment of co-participation to the professional or hospital that promotes the service as the fees are calculated on all medical acts, exams etc... In the current scenario of the American healthcare system, there will always be an additional cost to be borne by the end user, even in the case of Medicaid, Medicare or mixed funded hospitals[9,10,13].

In Brazil, according to the 2010 Census, 85% of the population has access to public health services through the Unified Health System (SUS) while only 35% of the Brazilian population benefits from a private health plan, and 10% of the population relies on medical services from philanthropy and non-governmental organizations. About 5% of the population remains without access to health services. Although it is considered the most complete health system in the world, it is also the most complex due to the intrinsic network of services and activities it develops. Nonetheless, in recent years, SUS has been severely impacted by numerous budget cuts[14, 15].

SUS has protocols for serving its citizens. To have elective access to the services of the Brazilian public health network, it is necessary to enter the system through a preliminary consultation at a health care station. A referral is generated, so that people receive primary medical care for prevention and control, treatment of chronic diseases, guidance and other services available in the SUS network. For this network to function, a general registration system was created with a unique registry for each citizen[15, 16].

SUS has a convoluted chain and structure, and is found in a country with gigantic territorial dimensions. In addition, the Brazilian health system has been, in recent years, continuously targeted through the reduction of investment in maintenance, in acquisition of medical equipment, in hiring and qualifying labor, in producing and distributing medicines and vaccines, among other critical points vital to its successful operation[12, 16,17].

COVID-19, IMPACT ON HEALTH SYSTEMS AND PUBLIC HEALTH

All national health systems already in operation before the emergence of SARS-CoV-2 were put under significant stress[18]. Only further efforts in strengthening their sectors and structures would enable them to face the new epidemiological situation.

The first complication was the scarcity of qualified labor for emergency situations, which was already a reality in many societies[4]. This labor is vital to operate mechanical ventilation equipment required to care for the severe respiratory syndrome caused by the SARS-CoV-2. That situation worsened rapidly, given the growing number of Covid-19 cases among professionals on the front line, further reducing countries' ability to treat their patients. In May 2020, the Federal Council of Nursing announced that the deaths of nursing professionals in Brazil exceeded those recorded in Italy, Spain and the United States [20,21]. Factors such as shortage of personal protective equipment, training and replacement of professionals in the risk group may have contributed[22].

In the light of the 2020 pandemic, medical exclusion also emerged as an acute problem faced by most countries, not only to achieve good results in the fight against coronavirus, but also to build strategies aiming to reestablish the socio-economic dynamics in the post-pandemic.

In the USA, the result of this exclusion has been evident in New York City, between the months of March and April. There, the health system collapsed with the rapid emergence of new cases and the high rate of serious cases of Covid-19, which filled hospital beds in record time and overwhelmed the emergency system capacity[23,24]. To make matter worse, health insurance companies interfered by initially denying plan coverage to their customers and even then monopolizing health care access in favor individuals for covered by insurance.

This situation revealed a social problem that had been neglected for years, but which emerged strongly in the midst of a global public health crisis. Perceiving that the lack of access to health services would bring a greater risk of contamination and spread of the virus, if not social disintegration; all political forces swiftly sanctioned the opening of service stations, against the interests of the powerful lobby of the health industry[24].

At a national level, temporary support policies were created so that many could have access to care and to appropriate treatment in case of symptoms of the disease caused by the new coronavirus. The Federal Government also credited all taxpayers with an Economic Stimulus Check ($1200, weighted by the family income), guaranteeing minimum subsistence for those jobless during the lockdown. Schools and universities were closed in the wake of the first cases of Covid-19 in almost all States, thus contributing to reduce the virus dissemination.

The quarantine was prescribed for anyone who arrived from a foreign location. The cancellation of large public events was also a strong ally in controlling the increase of cases, as well as the closing of stores and permission to operate was only given to services considered essential[25].

The measures taken by the American States have resulted in different epidemiological realities for each region. The States that imposed stronger restrictions showed fewer Covid-19 occurrences and a false sense of security developed, resulting in greater popular pressure for the reopening of trade and return to normality[26]. This attitude brings the high probability of new cases arising quickly, and this will only be known in a couple months when this article is already in historical context.

In Brazil, the first cases arose at the end of February 2020, right after the Carnival period. This popular party lasts a few weeks and promotes mass agglomerations with the participation of tourists from all over the world, the propitious scenario for the spread of diseases. At that time, there was still no epidemiological alert in the country[27].

Faced with the declaration of pandemic, many countries followed the WHO guidelines and organized their health systems to respond to the likely increase in cases of Covid-19. The Brazilian Federal Government, in contradiction with current scientific knowledge, opposed the WHO guidelines by turning a blind eye to the situation, refusing to implement lockdown and neutralizing the Health Ministry. This generated an unprecedented internal political conflict. During the months of April and May, several Brazilian States closed their borders, defined their own health agendas and declared health emergency, breaking up with the Federal Government ideology[28]. If such measures had not been adopted, projections by Geocovid indicate that in one month the number of infected people would be more than 7.2 million people and 500 thousand would have died[29].

The National Congress voted some support measures (e.g. building field hospitals), but not all have been implemented (like allocating emergency budget to States). One measure consisted in the payment of half of the minimum wage (approximately US $110) for the citizens in need. Thanks to digital exclusion or lack of bank account, thousands of Brazilians could not obtain their assistance online. They then created long lines at the doors of bank branches nationwide and promoted greater exposure to the new coronavirus[30].

Although the country has the best universal health system conceptually speaking, it has been attacked by the Brazilian Government in recent years through the low level of financing. The abandonment of SUS has weakened the structures of the system to the benefit of private health plans, and the chronic lack of investments in the areas of health and research will be more evident in the face of the Covid-19 pandemic[16].

Since the end of April, health authorities had stopped providing reliable data that could help monitor the progress of Covid-19 cases. Private health networks were functioning, with

above-average capacity. Meanwhile, the public health network operated at maximum capacity through SUS activities[28], which continued to be neglected by the Federal Government. In May 2020, the epidemiological situation in Brazil could already be considered out of control.

We are now aware of the most relevant actions the nations have taken towards their health systems and, in the near future, we will be able to evaluate the attitude of each government. At this moment we are living the historical facts and each action can still define the success or failure of public health policies.

Another example of a challenge to control the spread of a virus is the performance of tests with maximum population coverage, which allows the correct diagnosis for the new disease, creating the possibility of monitoring the cases and controlling the spread in a targeted way for each population [2, 3]. The production capacity and availability for Covid-19 diagnostic tests did not keep pace with the escalation of the pandemic in both countries. Brazil has about 210 million inhabitants[14], but developed a plan to guarantee the testing of a maximum of 22% of the Brazilian population, this is part of a strategy in the Diagnose for Care Program, created by the Ministry of Health in May of 2020. Until the end of August of 2020, the Brazilian states[19] had performed over 11 million tests[31]. The USA, which has a total of 327 million inhabitants, expanded the test stations to Covid-19 and implemented free tests to increase accessibility to the service, according to the records of the American Center for Disease Control (CDC), about 100 million of tests were carried out until the beginning of September 2020[6].

HEALTH SYSTEM AND POPULATION GROUPS MOST IMPACTED BY THE NEW DISEASE

The factor of health inequality in the World has been responsible for the increase in mortality caused by diseases considered controllable by continuous monitoring and treatment. These diseases are even the most frequent cause of death among the poorest population[9].

The social class composed by citizens who cannot afford “good health” is the same who makes up the base workforce that sustain nations, and, in case of emergency, intervention in the shortest possible time is what influences the mortality rate or improved life condition for this population [11, 12, 31].

This social class, generally invisible in the formulation of public policies, now becomes the core factor for controlling the spread of Covid-19. In this context, they are workers from the lowest wage bands of both countries, self-employed people, workers with basic contracts, and other vulnerable laborers. Many of these professionals are paid by the hour and the absence of

revenue would be lacking in the family budget, in addition to not having sick leave or labor rights that guarantee their temporary removal for health reasons [31].

This reality promotes the greatest exposure to the SARS-CoV-2 virus and facilitates the diffusion of Covid-19. According to data from the 2018/2019 American Census Bureau, 12.7% of the US population currently lives in poverty (see Fig.1), which means that 41 million people cannot afford health services and are excluded from the private health system, or only use it in an emergency, usually generating personal and family debts[13].

In Brazil, 25.4% of the population, about 54 million of citizens, is in a situation of poverty, however, this does not exclude them from the public health system. The population has, in principle, guaranteed and free access to medical services, emergency care, prevention, vaccines, surgeries of all kind, as well as individualized special care[14, 15]. The Brazilian SUS evidently serves mainly the poorest part of the population, which will also be the most affected by the ongoing deficiencies of the public health system [31].

During the pandemic, all countries felt the impact on their health systems, with sharp changes on the daily realities of the general population. However, populations that traditionally do not have access to health services as a guaranteed right, people who cannot leave their jobs due to lack of social or labor protection, and the communities living in poverty will be most affected in every way during the Covid-19 pandemic.[31]

4 DISCUSSION

In view of what has been presented here, the Governments of both countries shall adjust their actions to combat the pandemic caused by the SARS-CoV-2 virus, urgently providing social protection and equal access to existing medical services for their most vulnerable populations, creating (for the USA) and strengthening (for Brazil) a family care base for screening cases and controlling the spread of Covid-19.

The American health system remains essentially inaccessible to the poorest class of the population. Yet, some measures have helped provide relief to the lower social classes affected by the new coronavirus. Much remains to be done, like establishing a family medical care network to promote the health, regardless of financial conditions. The USA could also invest in the implementation of stronger social and labor protection for employees who experience symptoms or test positive for Covid-19 and others diseases, so they may be absent from their workplace for the necessary recovery time.

Brazil, despite theoretically having an excellent Unified Health System (SUS), is experiencing serious dysfunctions that already overwhelmed some services essential to control the pandemic. The country should invest more in the performance of health agents, install points of basic care close to poor communities and locations of difficult access, promote social protection of the most vulnerable groups with support for subsistence during this crisis, encourage social distancing, and implement testing sites outside of hospital units for disease control. Not less important, the healthcare professionals should be valued and recognized, starting being provided with suitable protective equipment.

Health inequality affects the poorest part of the population, which is now the most vulnerable in the face of the crisis caused by the new coronavirus, causing damage to individual and collective health. For this group is composed of workers mainly found at the basis of the maintenance and development of each country and their services are essential for the balance of socioeconomic structures and the recovery of the nations in the post-pandemic. Therefore, actions based on public health to expand social justice should not be seen as charity, but as a public policy and governmental strategy to face the Covid-19 pandemic.

REFERENCES

1.Lai CC, Shih TP, Ko WC, Tang HJ, Hsueh PR. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (Covid-19): The epidemic and the challenges. Int J Antimicrob Agents: 2020; 55(3):105924. Doi:10.1016/j.ijantimicag.2020.105924

2.Ujvari SC. Pandemias: A humanidade em risco. São Paulo: Contexto, 2011. 220 p. ISBN: 978-8-7244-632-7

3.Barata RCB. Epidemias. Cad. Saúde Pública vol.3 no.1 Rio de Janeiro Jan./Mar. 1987

4.Luna EJA, Silva Jr JB. Doenças transmissíveis, endemias, epidemias e pandemias. In Fundação Oswaldo Cruz. A saúde no Brasil em 2030 - prospecção estratégica do sistema de saúde brasileiro: população e perfil sanitário [online]. Rio de Janeiro: Fiocruz/Ipea/Ministério da Saúde/Secretaria de Assuntos Estratégicos da Presidência da República, 2013. Vol. 2. pp. 123-176. ISBN 978-85-8110-016-6.

5.Silva JC. Two complete genome sequence for coronavirus in Brazil were published. March/3/2020. https://www.eurekalert.org/pub_releases/2020-03/fda-tcg030320.php

6.Cases Covid-19: https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html

7.Casos Covid-19 Brasil. Fonte: Consórcio de veículos de imprensa a partir de dados da secretarias estaduais de saúde.

8.Cases Covid-19: . https://coronavirus.jhu.edu/map.html.

9.Noonan AS, et al. Improving the health of African Americans in the USA: an overdue opportunity for social justice. Public Health reviews. BioMed Central (2016) 37:12. Doi 10.1186/s40985-016-0025-4

10.Martins AA. People or Profit: A Comparison of Health Care in Brazil and the United States. Health Care Ethics USA: 2018; 25-28.

11.Barreto ML; et al. Successes and failures in the control of infectious diseases in Brazil: social and environmental context, policies, interventions and research needs. TheLancet, 2011. 377: 1877-1889. https://doi.org/10.1016/S0140-6736(11)60202-X

12.Carrapato P, Correia P, Garcia B. Health determinants in Brasil: searching for health equity. Saúde Soc. São Paulo: 2017. V.26, n.3, p.676-689. Doi 10.1590/S0104-12902017170304

13.Berchick ER, Barnett JC, Upton RD. Health Insurance Coverage in the United States: 2018. Report number P60-267 (RV). Census Bureau, USA: November, 2019.

14.Censo Saúde Brasil 2010. https://www.ibge.gov.br/estatisticas/sociais/saude.html.

15.SUS. https://www.saude.gov.br/sistema-unico-de-saude.

16.Souto-Marchand AS & Carvalho-Costa FA. Alertas epidemiológicos no Brasil. in “Integridade Científica, Saúde Pública, Bioética e Educação em Saúde no Instituto Oswaldo Cruz”. (Cassimiro & Diós-Borges orgs). Ed Fi: Rio Grande do Sul: 2017. 260.

17.Legislação Básica do SUS. https://bvsms.saude.gov.br

18.Contini C, Di Nuzzo M, Barp N, et al. The novel zoonotic Covid-19 pandemic: An expected global health concern. J Infect Dev Ctries: 2020;14(3):254-264. Published 2020 Mar 31. doi:10.3855/jidc.12671Corporation BBC News. https://www.bbc.com/portuguese/internacional-52365489.

19.Brasil. Ministério da Saúde. https://www.saude.gov.br/noticias/agencia-saude/46868-ministerio-da-saude-ja-distribuiu-6-9-milhoes-de-testes-para-covid-19.

20.Conselho Federal deEnfermagem (Cofen): Brasil perdeu mais profissionais de Enfermagem que Itália e Espanha juntas. Brasília 2020: http://www.cofen.gov.br/brasil-perdeu-mais-profissionais-de-enfermagem-para-COVID-19-do-que-italia-e-espanha-juntas_79563.html.

21.de Quadros A, Fernandes MTC, Araujo BR, Caregnato RCA. Desafios da Enfermagem Brasileira no Combate da COVID-19: uma reflexão. *Enfermagem em Foco*. 2020;11(1 Esp)

22.Breakdown in New York. https://www.nytimes.com/2020/03/19/nyregion/coronavirus-new-york-update.html.
23. Huckman RS. What Will U.S. Health Care Look Like After the Pandemic? Economic & Society in Harvard Business Review: Abril/2020: https://hbr.org/2020/04/what-will-u-s-health-care-look-like-after-the-pandemic
24.Government Response to Coronavirus. https://www.usa.gov/coronavirus.
25 Elassar A. This is where each state is during its phased reopening. May/2020: https://www.cnn.com/interactive/2020/us/states-reopen-coronavirus-trnd/
26. Rodriguez-Morales AJ, Gallego V, Escalera-Antezana JP, et al. COVID-19 in Latin America: The implications of the first confirmed case in Brazil [published online ahead of print, 2020 Feb 29]. Travel Med Infect Dis. 2020;101613. doi:10.1016/j.tmaid.2020.101613
27. Charner F. Deforestation in the Amazon is accelerating despite coronavirus. May/15/2020: https://www.cnn.com/2020/05/14/americas/coronavirus-amazon-brazil-destruction-intl/index.html
28.Geocovid. https://covid.mapbiomas.org/.
29. Mansur R. Em meio à pandemia de coronavírus, bancos registram longas filas em Contagem. April/15/2020: https://www.otempo.com.br/coronavirus/em-meio-a-pandemia-de-coronavirus-bancos-registram-longas-filas-em-contagem-1.2325208
30. Souto-Marchand AS de. Doenças infecciosas e suas correlações com Indicadores socioeconômicos e demográficos: estudo Ecológico em diferentes estados brasileiros. Tese de Doutoramento. Instituto Oswaldo Cruz – PPG Medicina Tropical. Rio de Janeiro: 2017.
31. Repositório de dados no GitHub: wcota/covid19br Disponivel em: https://covid19br.wcota.me/