

São Paulo City Hall and the Covid-19 Pandemic: an Innovative Approach to Public Planning and Purchasing

Marian Salles Gomes Bellamy

Public Policies Analyst at São Paulo Municipality, currently a Master's student in Public Health at USP, Finance Specialist, Graduated in International Relations USP and researcher at CEBRAP

Ricardo Ferreira Santos

Graduated as a Civil Engineer at the Federal University of Bahia, Specialist in Business Strategy — Mackenzie, Internal Auditor for the Municipality (CGM —SP), and currently chief of staff of Counselor Mauricio Faria at TCMSP

Eduardo Emílio Lang Di Pietro

TCMSP External Control Auditor. Graduated in Civil Engineering and Law (Mackenzie) and Administration (FGV). Specialist in Management and External Control of Public Accounts; studying MBA in PPPs (FESPSP / London School of Economics). Ex-Director of the School of Government

Vitor Levy Castex Aly

Civil Engineer, Master in Civil and Urban Engineering at EPUSP, Assistant Professor at the Civil Engineering Department at EPUSP. Secretary of Infrastructure and Public Works at the Municipality of São Paulo

Abstract: São Paulo City Hall has furthered several actions to reduce the effects of the Covid-19 pandemic on the population. These actions took place in the field of policy planning and acquisition and were effective and innovating in many aspects. It is relevant to analyze this experience considering the possible future occurrence of other pandemics, in order to identify successful initiatives by the public sector as well as to perfect future actions.

Keywords: Covid-19. Pandemic. Planning. Acquisition. Innovation and public sector.

1 Introduction

In the second fortnight of March, the city of São Paulo decreed an emergency situation (Decree # 59.283 of March 16, 2020) due to the new coronavirus pandemic and adopted social distancing as the main measure to contain the pandemic. This decision was based on the recommendations of the World Health Organization (WHO). Such initial action also followed the directives of the State Health Contingency Committee, representing the alignment of the two federal entities (state and municipality), which remains during all the confronting of this sanitary crisis, as yet

unfinished. Furthermore, this positioning also showed the need to align local public powers with international directives and experience, in order to safeguard the life and health of the population in the best way possible regarding a new, critical and unexpected situation.

As notified, the Pandemic started in China, more precisely in Wuhan at the end of December 2019, when the first cases of a pneumonia, of unexplained origin, were detected and, thanks to a methodology of sanitary surveillance and identification developed in China (ZHU, LI, 2020), after the outbreak of SARS in 2003, the new coronavirus was recorded: SARS-COV-2. This speedy Chinese response showed the relevance of learning with epidemics/pandemics which occur, in order to improve response protocols, in both the area of epidemiology, as observed, and public policies generally speaking.

On January 30 WHO declared an international public health emergency. At first, the virus spread to Asia and Europe reaching Brazil with greater intensity at the end of March 2020. Given the path taken by the illness and the two months' "advantage" which Brazil gained in the global spread of the pandemic, it made sense to practice in São Paulo city certain measures adopted internationally – mainly social distancing.

According to the theory of the North American writer David Quammen, presented in his book *Contagion: Infections of Animal Origin and the Evolution of Pandemics*, it is understood that the pandemic experienced by coronavirus SARS-COV-2 is not the first one and will not be the last one. Nevertheless, in spite of not being the first experience of a sanitary crisis, it was the one with the greatest effect on the Economy and which most required state action, since the declaration of the Constitution in 1988. The existence of the Brazilian National Health System ("SUS") in Brazil, which has as principles – universalization, equity and integrality, besides

also being structured by means of organizational principles of regionalization, hierarchy, decentralization, single command and participation – was extremely relevant to ensure a good standard of attendance throughout its services network stretching throughout the territory. The existence of "SUS" – created by the Constitution of 1988 – is one of the reasons whereby it was possible to handle the pandemic even in a context of political misalignment between federal entities (especially, a scenario of denial of the crisis by the Federal Government). On the other hand, a problem that was made explicit by the pandemic was the lack of a national strategic industrial park which left us dependent on the international market to supply us with even the most basic medical equipments and goods.

Bearing in mind the perspective of the occurrence of new pandemics, besides the requirement of strengthening the structure of "SUS", it is also relevant to identify the successful practices of the public sector, as well as possible need for improvement, so that the public authority responds even more assertively to future emergency sanitary contexts. This, moreover, had already been the position adopted by WHO in 2009 after the outbreak of Influenza, when Dr. Nahoko Shindo recommended: "It's vital for the global health world community to take in what happened during the 2009 epidemic and learn from it." She warned that if this were not done soon, countries would forget what had occurred: "We need to fix the things that didn't work so that we can tackle similar threats better in future."

Thus, the present Case Study, undertakes to record and analyze aspects observed during the performance of a temporary Work Group created to aid in the planning, acquisition and work of São Paulo City Hall during the first three months of the crisis – April, May and June – of the Covid-19 pandemic. This experiment is intended to be used to identify the

adaptive capacity of the Municipal Public Administration to conduct public health and infrastructure policies in the context of the pandemic in order to encourage reflecting about future public actions in emergency contexts. One is going to analyze to what extent the traditional mechanisms of planning and purchasing of the public sector needed to be remodeled in an emergency context, besides requiring maintenance and renewal of public equipment to handle the demand arising in this context.

The experiment was composed of a group of three municipal public employees who work in the areas of public management, internal control and external control. The action was made feasible due to the synergy between External Control and Public Management, united to further transversal and intersectoral action. Furthermore, it was necessary to establish a constant dialog between two municipal secretariats: Urban Infrastructure and Health.

The selection of the public employees for this Work Group took into account the requirements identified by São Paulo City Hall – knowledge in engineering, public health, public purchasing –, as well as volunteering to be physically present in a context of risk in which home office work was predominant in the administrative areas of the public authority.

Also in this context one should stress the relevance of evaluating public policies which is increasingly present in every aspect in public management. Thus, it is understood to be relevant to evaluate certain mechanisms of public policies, especially concerning the requirement of making them more flexible. It is also relevant to remodel the ways in which the public sector acts when facing an exceptional context caused by a sanitary emergency.

2 Methodology

This Case Study was prepared based on an Experience Report of a Work Group with the participation of the four authors of this

article, civil servants, designated to work at the Municipal Secretariat of Urban Infrastructure (SIURB) in the office of the Secretary – Vitor Aly – member of the Emergency Work Group of Covid-19. These public employees were invited to be part of this Work Group and contribute to the planning of actions regarding the pandemic, in both purchasing and renewing public health equipment. The group worked during three months jointly and in person in the office of SIURB.

This assignment allowed contact with a reality other than that of planning, acquiring and renewing usually experienced in the public area. This is due to several specific factors present in a context of sanitary emergency. By means of this experiment the group identified certain aspects of Public Administration and Administrative Law which need to be reviewed as well as the advantages of a more crosswise action which also includes members of the general public and university. This article attempts to report this experiment and record this learning.

3 Planning: Theory and Practice

The traditional concepts of planning as stipulated by the Theory of Public Administration define planning as: “interpreting the organizational mission and establishing the objectives of the organization, as well as the means required to attain these objectives with maximum efficacy and efficiency.” (CHIAVENATO, 2004, p. 209)

The planning in Administration can be categorized into Strategic Planning, Tactical Planning and Operational Planning (CHIAVENATO, 2004). The first one being defined by Peter Drucker as “the continuous process of, constantly and with the widest knowledge of the future contained: making current choices that involve risks, which, the better planned they are, the less threats they will represent; organizing systematically the activities required

for executing such choices and, by means of an organized and overall feedback; measuring the results and the aims of these decisions related to the expectations established.” Whereas Tactical Planning is presented by Chiavenato as medium-term planning, consisting of deployment of the strategic planning to the internal areas of the organization. And operational planning is the shortest term and even more specific, focused upon operations executed more daily in the organization, according to Chiavenato.

The public sector also uses these theoretical principles and has as planning instruments, among others, sectoral plans (Municipal Education Plan, Municipal Health Plan, etc.), budget plans (Multi Annual Plan), the City’s Urban Plan, the Goals Program.

Nevertheless, in a context of sanitary emergency such tools/instruments usually employed in both the public sector and private sector proved to be insufficient for the speedy planning required in a context of uncertainty.

The need to acquire medical supplies in the correct quantity, create ICU and nursing beds, suspend elective clinical procedures, further renewal in health equipment and laboratories cannot be suitably planned based upon traditional planning models of Administration Theory. Likewise, the products usually offered by consultancy companies to improve the planning of acquisitions in the public area: systems, control of inventory, demand; were insufficient, as the classical methods of forecasting demand and acquisitions are based upon historical analysis. However, in a totally new scenario in which foreseeing potential demand is essential so that the health policies respond suitably to the requirements of the scenario, making the acquisition, renewals and creating beds so that all the population affected by the pandemic can be duly cared for, it is necessary that the public sector adopts tools of the University, more specifically epidemiological simulation (NORONHA).

Epidemiology is the study of the occurrence, distribution and determining factors of events related to health in specific populations, and the application of that knowledge to the control of health problems (PORTA, 2014). Thus, by means of mathematical modeling epidemiology can indicate the behavior of the epidemic curve in the case of Covid-19 in order to aid the decisions of the public power concerning the acquisition of medical supplies and creating hospital beds.

The City Administration adopted this course of action in constituting the Covid-19 Technical-Scientific Committee by means of Administrative Ruling 170/2020 SMS G of April 02, later replaced by Administrative Ruling 240/2020 SMS G. This Committee includes lecturers of public universities responsible for preparing possible and probable models of epidemiological scenarios in order to aid the actions of the Executive Branch in containing the epidemic of Covid-19. The Technical Advisory Group in Epidemiology and Mathematical Modeling modeled the estimated requirements of beds in accordance with the scenarios projected. The most concerning scenario was that of the exponential growth in the demand for beds, i.e., of the epidemic curve. The same technical group also modeled a scenario of reduced growth in demand, denominated logistical model. These projected scenarios were used to estimate the requirements of ordinary beds for hospitalization as well as ICU beds. The discrepancy in the number of estimated cases of acute respiratory syndrome hospitalized among the scenarios projected was approximately 63%.

Furthermore, in the same way that it was necessary to model the projection of the number of cases of acute respiratory syndrome to estimate the requirement of hospital beds, it was also necessary to foresee the quantity of deaths in order to estimate the supplies and demand for the funeral service. The purpose was to foresee the

demand and avoid the situation seen in other places, such as for example, New York, where collective graves needed to be opened quickly, as well as to allow the public power to furnish the most varied supplies required in this area, from the most obvious such as caskets to the most unusual such as cold storage¹.

In order to allow greater accuracy in the modeling which aided the decisions of acquisition and policies adopted, a partnership was established to encourage and use the results of a sampling study developed in partnership by the university and private sector. The study was coordinated by Dr. Beatriz Tess of the Medical Faculty of the University of São Paulo, and also involved the São Paulo Medical School, the Public Health Faculty of the Federal University of São Paulo, besides private bodies such as the Fleury Group, Ibope Inteligência and the NGO Instituto Semeia². The decision to prepare a specific study of São Paulo city itself, as opposed to the association of the city in a national study was due to the political scenario, which noted great fragility in the capacity of articulation of the federal government during the sanitary crisis. Such perception was correct, as in spite of not appearing to be the most appropriate decision from a technical point of view, the national study was rendered unfeasible weeks later by the Ministry of Health.

Whereas the study in the municipal scope was very successful and contributed to furthering even greater assertiveness in the modeling and, consequently, in the policies adopted, including social distancing. So that the decision concerning the return to lessons in the municipality will also be partially supported by a serological survey executed in the municipal educational network.

4 What is Innovation in the Public Sector in the Context of Pandemic?

Innovation is usually strongly associated with technology and the private sector

(SCHUMPETER, 1939), nevertheless, innovating can be conceived as “placing what is new into action, executing gradual or radical changes as the result of human intention – as a rule, starting from a collective component” (CUNHA *et al.*, 2017) and from this broader perspective, it is possible to reflect on what innovation represented in the context of the Covid-19 pandemic in the municipality of São Paulo.

The authoress Tharsila Maynardes D. Fariniuk discusses innovation and the concept of smart cities, during the context of the pandemic, in her article “Smart cities and pandemic: digital technology in the public management of Brazilian cities”. She drew up ten categories concerning the use of digital tools in the pandemic to look at the issue: “education/learning at a distance, digital tools supporting hospitals/health, reinforcement of information to the population by digital means, digital cultural transmission, monitoring of agglomeration by geolocalization data, municipal services, online tax assistance, hackathon.” Such categories are of interest to the extent that digital tools are analyzed, and São Paulo city made use of several of these tools during the pandemic. However, it should be pointed out that not every technological tool adds value in an emergency context.

It is necessary to evaluate carefully in order to avoid wasting energy and public resources in tools of which the functioning depends upon sharp alterations of routines and the incorporation of new activities with low generation of value. In a scenario of insecurity and instability such as a pandemic many digital services and proposals of tools are offered to the public sector, and a swift and at the same time discerning analysis is indispensable, for example, many proposals of applications of traceability of the epidemic were offered by the private sector, nevertheless, besides concern with data secrecy, especially clinical data, there should be an analysis concerning the timeliness of the tool proposed and how appropriate it is

for resolving the issues involved.

In the case of identifying cases of Covid-19 – the aim of certain tools proposed to the municipality – the difficulty of identifying cases by the public power at the start of the pandemic was due to a scarcity of tests available owing to the need to import the product and a global shortage in the offer of these supplies. An applicative or any other digital tool would be ineffective related to the root of the problem. Also regarding this issue, even after resolving the initial snag of acquiring supplies (tests), the most effective way of tracing the cases was by the information systems existing in the City Hall and public power, even though it was possible to improve them for the specific context of the pandemic. The creation of a parallel mechanism of which the information source was not automated and integrated with the public systems already existing would not easily add value.

The article of Sakellarides presents two different mindsets about the pandemic, the epidemiological issues being framed in a more authoritarian, centralized and normative logic, which prescribes protocols to be followed.

Nevertheless, from the point of view of public management, it can be argued, bearing in mind the experience of São Paulo, that the incorporation of the epidemiological tools in the institutional instruments of planning and acquisition is not a means of prescribing action, but aids with technical elements the decisions of public policies. Furthermore, the very institutional mechanism of operating the incorporation of this scientific knowledge is distinct from a normative perspective and acts in a flexible and innovating way in the public sector. In reality, it represents an advance regarding traditional mechanisms of planning and proves to be an effective way of forming a partnership with the university. Likewise, it is innovating for the university itself to have available its specialists to act more effectively and swiftly

regarding the real demands of the public sector and the population in a context of sanitary emergency.

Beyond these innovating aspects, it is worth highlighting the transversal performance observed in the period. The Public Administration tends to act in a sectoral way: the budget is divided into sectors, the usual instruments of planning (Municipal Plans, PPA, Goals Program) are divided into sectors, careers are sectoral, and such instruments make it difficult for the public power to act between sectors, despite there being a reasonable amount of agreement concerning the relevance of this model of acting in public policies (MONNERAT; SOUZA, 2014). The context of the pandemic also brought this innovation – here understood in its broad concept (CUNHA *et al.* 2017) – and strengthened performance between sectors. An example of this³ was the dialog established between Health and Education, containing the following participants: Municipal Secretariat of Education, Regional Directory of Education, Educational Unit, Municipal Secretariat of Health, Municipal Secretariat of Social Assistance and Development and Municipal Secretariat of Human Rights by means of the establishing of Work Groups in order to define the sanitary protocol of returning to lessons. This is not the first or sole joint action between sectors, nevertheless, this type of action and even more occurring in an organic and effective way, is minor in the scope of Municipal Administration.

5 Innovation and Public Purchasing

Due to the chaotic scenario already alluded to in this article and the quick transmission of the disease in the Municipality, it was of utmost importance that the Municipal Health Secretariat acquired, in a short time, several medical supplies, as well as contracting field hospitals, increasing existing beds, renewing public equipment, etc. Furthermore,

the pandemic also caused other impacts to be overcome by the Public Administration, such as human resources limitations, as a great quantity of civil servants had some of the risk factors for Covid-19 and had to work from home, and, as it concerns a completely novel situation for the Municipal Public Administration, quick and efficient mobilization was required.

In this context of scarcity of workforce and excessive demand, the Health Secretary requested the support of the Secretary of Infrastructure in executing one of the phases of the process of public purchasing – price study – for acquiring personal protection equipment, respirators and ICU equipment, as well as for adapting the laboratories of the municipality, in order to allow the execution of serological and Covid-19 tests, and renovating hospitals for increasing beds, etc.

In this scenario, the usual means of contracting, in accordance with Law 8.666/1993, the General Bidding Law, were incapable of fulfilling the requirements of Administration, mainly due to the large bureaucratic rite foreseen by law, mandatory terms to ensure advertising and competitiveness and the lack of foresight of advance payment or use of means of payment with guarantee, such as letter of credit or escrow account.

Regarding the equipment requested, although related to the health area, it had different manufacturers and, to a large extent, outside Brazil, as the domestic market did not have sufficient productive capacity to handle its demand. Such a situation also exposed the weakness of the domestic industrial policy, which does not include certain strategic sectors of the medical equipment industry, of both basic production (for example medical gloves) and pharmaceuticals. Moreover, the quantity of supplies required at the moment of peak of the crisis also differed from normal conditions, even rendering international supply difficult, leading to a true “race” for equipment and supplies.

In this respect, the scope of the pandemic caused an extremely high demand, especially in the months of March/April, generating as a result, the lack of equipment, exorbitant prices (when compared with the prices practiced previously), “robbing” of loads between countries. Also, due to the speed with which the scenario of availability of equipment altered, as well as the lack of knowledge of how severe the pandemic would be, the Administration faced an unprecedented situation, namely, the demand for advance payments by the manufacturers to ensure the supply of the product, with little guarantee that the factories would accomplish the terms established. The headlines transmitted in the media show this scenario of instability in the market of medical equipment and raw materials:

“China cancels purchase of respirators by Bahia, and cargo was held in the USA”⁴⁷ “Coronavirus: the USA is accused of ‘robbing’ and ‘deviating’ equipment which would go to Germany, France and Brazil”⁴⁸ “Germany centralizes purchase of equipment to handle pandemic”⁴⁹ “Holland orders recall of protection masks from China”⁵⁰ “Covid-19: CADE investigates abusive increase in prices of products”⁵¹

Thus, after analyzing the practices of other federal entities (municipal, state), as well as of other countries, the best means found to acquire such equipment, due to the great quantity of products which the City needed and the high prices practiced, was by means of a purchase abroad, from the manufacturers that still had the products, using a Brazilian trader as intermediary, as such companies are specialized in foreign trade and in managing several contracts for supply. Furthermore, the organization of the logistics in the country of origin for dispatch to Brazil was essential, bearing in mind, also, the restrictions of international mobility caused by the pandemic.

In this issue of public acquisition, the

innovation was to deal with this adverse scenario in order to find legal and institutional support which dealt with the actual situation. In this field certain legislation identified stands out: in the federal realm PEC 10/20 known as PEC of the “war budget” was approved. This Amendment allows the hiring, by simplified processes, of temporary staff, works, services and purchases related exclusively to facing the situation of public calamity and while it lasts. Besides procedural-administrative simplification, the Amendment allows the creation and increase of expenses provided that it is not in a permanent way, by acts of the Executive Power and by legislative proposals. Also in the federal area there stands out Law 14.035 of August 11, 2020, which converted into law the Provisional Measure 926. Article 4 of this law deals specifically with flexibilization in the processes of acquiring or hiring goods, services, including of engineering, and supplies required to handle the public health emergency.

In the state area extensive legislation was also published in the period in order to handle the situation of calamity experienced by society. Concerning the performance of the public power in handling the crisis, there stands out Decree # 64.928, of April 8, 2020 which states:

Art. 1 While the state of public calamity recognized by State Decree # 64.879, of March 20, 2020 lasts, the acquisition of goods, services and raw materials required to deal with the pandemic arising from COVID-19 (New Coronavirus) dispenses with the comment set forth in the “head provision” of article 2 of Decree # 32.117, of August 10, 1990, amended by Decree # 43.914, of March 26, 1999.

§ 1 The exemption foreseen in the “head provision” of this article is restricted to the direct bidding and hiring executed during the validity of the state of public calamity.

§ 2 The payment of the acquisition referred to in the “head provision” shall be able to be executed at sight through signing the

contract term, with specific technical expression and report of the Office of the Attorney-General of the State for the case concerned.

It is emphasized that this procedure of authorization for payment at sight of essential goods and equipment, through contractual signing, subverts the usual process of acquisition of the public sector, which only allows payment after the delivery of the good and/or service. Nevertheless, the usual acquisition process did not meet the requirements of the population at the moment or the supply restrictions noted in the emergency context, hence the requirement for this legal amendment.

In the municipal jurisdiction several legislative measures were edited, with Decree # 59.283 of March 16, 2020 standing out. This was the decree which declared the emergency situation in the municipality, and, despite it bringing certain innovations to the processes of acquiring goods and services in its Art. 2, they were mild, as there was no clear authorization for acquisition overseas by means of advance payment. If on one hand this safeguards the public exchequer, on the other hand, it makes certain acquisition necessary during the pandemic unfeasible:

Art. 2 To deal with the emergency situation hereby declared, the following measures are established:

I - goods and services of physical and legal entities shall be able to be requested, in which case the later payment of fair compensation shall be assured;

II - in the terms of art. 24, of Law # 8.666, of June 21, 1993, it is authorized to dispense with bidding for acquiring goods and services intended to deal with the emergency.

§ 1 The emergency hiring executed based upon subsection II of this article shall be able to be agreed with mandatory payment term which ensures the supply of raw materials and/or medicaments, even though not

observing the strict chronological order of the dates of requirements of the obligations, forbidding their payment in advance. (Included by Decree # 59.362/2020)

§ 2 Exceptionally, advance payment shall be able to be accepted of the obligations arising from emergency contracting based upon subsection II of this article, provided that the contracted entity renders full and suitable guarantee by one of the modalities foreseen in article 56 of Federal Law # 8.666, of June 21, 1993, and that the supplier is the only one capable of supplying the raw material and/or medicament, through conclusive technical report.(Included by Decree # 59.362/2020).

On the other hand, Law # 17.335, of March 27, 2020 was innovating and provided the legal-institutional framework required to maintain administrative public contracts of rendering services, safeguarding dozens of thousands of jobs and ensuring the maintenance of essential services.

The legislation presented is only a small portion of all the framework which needed to be reviewed in order to handle the scenario experienced, both in budgetary terms, and in planning instruments, and in terms of acquiring goods and services and works/renewals required.

6 Conclusion

As presented, the sanitary, social and economic crisis unleashed by the Covid-19 pandemic demanded from the public sector swiftness, flexibility and capacity of adaptation (RODRIGUES *et al.*, 2020). In this context the traditional instruments of planning, logistics and acquisition used in the public area proved to be insufficient. This perception led to the use of other interinstitutional mechanisms for planning and public action, such as forming Management Committees of the sanitary crisis with the participation of university specialists, Intersectoral Work Groups, forming

public-private partnerships and adopting a more flexible approach and non-hierarchical management of the crisis.

Furthermore, not only were the performance mechanisms flexibilized, but so were the tools which were used: epidemiological modeling for planning renovation and as a basis for government procurement. In order to obtain greater accuracy in the modeling, use and support for executing sampling research (serological survey) by public and private entities (FMUSP, Ibope, Fleury, etc.) also leading to greater speed in another sphere of the public sector: university. The instruments of purchasing and payment also needed to be adapted to a scenario of scarcity of medical supplies which became essential in the context of the pandemic in quantities much above the historical demand for determined items such as personal protection equipment (PPE), burial items (casketss, bags), laboratory raw materials such as rayon, serological tests, etc. Besides the reduced number of players able to handle the demand, they were mostly international entities, which required specialized analyses of logistics, suitability of possible commercial partners and means of enabling payment.

Such performance by the public sector is innovating within a broad perspective of the concept of innovation – understood as being a different way of executing processes and policies – and, more than this, it concerns an innovation which generates value. An innovation which exceeds the mere use of technology, but makes use of it together with other tooling and other entities in order to allow an effective performance based upon evidence by the public power. Bearing in mind the perspective of future epidemics/pandemics it is essential to absorb these new instruments in the dynamics of the Public Administration as well as to reflect concerning other instruments, protocols, processes and relevant entities capable of contributing to similar scenarios in the future.

References

- CHIAVENATO, Idalberto. **Introdução a Teoria Geral da Administração**. Rio de Janeiro: Elsevier, 2004 – 3ª Edição.
- FARINIUK, Tharsila Maynardes Dallabona. Smart cities e pandemia: tecnologias digitais na gestão pública de cidades brasileiras. **Rev. Adm. Pública**, Rio de Janeiro, v. 54, n. 4, p.860-873, August, 2020.
- IPEA - INSTITUTO DE PESQUISA ECONÔMICA APLICADA. **Inovação no setor público: teoria, tendências e casos no Brasil**. Brasília, 2017.
- LI Q, GUAN X, WU P, *et al*. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. **New England Journal of Medicine**, England. 2020; 382:1199-1207.
- MONNERAT, G. L., SOUZA, R. G. de. Política social e intersectorialidade: consensos teóricos e desafios práticos. **Revista SER Social**. Brasília, v. 12, n, 26, p. 200-220, Jan./Jun. 2009.
- NORONHA, Kenya Valeria Micaela de Souza *et al*. Pandemia por COVID-19 no Brasil: análise da demanda e da oferta de leitos hospitalares e equipamentos de ventilação assistida segundo diferentes cenários. **Cad. Saúde Pública**, Rio de Janeiro, v. 36, n. 6, e00115320, 2020.
- OBSERVATÓRIO COVID-19. **Vulnerabilidade estrutural dos hospitais e cemitérios e crematórios da cidade de São Paulo à COVID-19: relatório técnico**. São paulo, 2020.
- PANIZZON, Mateus; COSTA, Camila Furlan da; MEDEIROS, Igor Baptista de Oliveira. Práticas das universidades federais no combate à COVID-19: a relação entre investimento público e capacidade de implementação. **Rev. Adm. Pública**, Rio de Janeiro, v. 54, n. 4, p. 635-649, August, 2020.
- PEREIRA, P. A. P. A intersectorialidade das políticas sociais na perspectiva dialética. In: MONNERAT, G. L.; ALMEIDA, N. L. T.; SOUZA, R. G. de. (Org.). **A intersectorialidade na agenda das políticas sociais**. Campinas: Papel Social, 2014. p. 21-39.
- PORTA M. **A dictionary of epidemiology**. 6th ed. New York: Oxford University Press, 2014.
- QUAMMEN David. **Contágio - Infecções de Origem Animal e a Evolução das Pandemias**. Companhia das Letras, 2020.
- RODRIGUES, Vinícius Picanço *et al*. Pandemic responses in vulnerable communities: a simulation-oriented approach. **Rev. Adm. Pública**, Rio de Janeiro, v. 54, n. 4, p. 1111-1122, August, 2020.
- SCHUMPETER J. A. (1939), **Business Cycles**. New York, NY: McGraw-Hill, 1939.
- WU, D.; WU, T.; LIU, Q.; YANG, Z. The SARS-CoV-2 outbreak: What we know. **International Journal of Infectious Diseases**, v. 94, p. 44-48, May 2020.
- WU P, HAO X, LAU EHY, *et al*. Real-time tentative assessment of the epidemiological characteristics of novel coronavirus infections in Wuhan, China, janeiro 2020. **Eurosurveillance** 2020; pg 25.
- ZHU N, ZHANG D, WANG W, *et al*. A novel coronavirus from patients with pneumonia in China, 2019. **New England Journal of Medicine**, England. 2020; 382:727-733.

Notes

1 Available at <https://jornaloexpresso.wordpress.com/2020/04/25/prefeitura-de-sao-paulo-tem-lista-macabra-de-compras>. Accessed on October 4 2020.

2 Available at <https://www1.folha.uol.com.br/equilibrioesaude/2020/06/segunda-fase-de-mapeamento-da-covid-19-em-sao-paulo-e-iniciada.shtml>. Accessed on October 13 2020.

3 Available at <http://www.docidadesp.imprensaoficial.com.br/NavegaEdicao.aspx?ClipID=3a4c4a13268be089341bebae2ce0ac42&PalavraChave=f%C3%A1tima%20cristina%20abrao>. Accessed on March 10 2020.

4 Available at <https://www.bbc.com/portuguese/internacional-52166245>. Accessed in September 2020.

5 Available at <https://www.bbc.com/portuguese/internacional-52166245>. Accessed in September 2020.

6 Available at <https://www.dw.com/pt-br/alemanha-centraliza-compra-de-equipamentos-para-enfrentar-pandemia/a-52959082>. Accessed in September 2020.

7 Available at <https://www.dw.com/pt-br/holanda-ordena-recall-de-m%C3%A1scaras-de-prote%C3%A7%C3%A3o-da-china/a-52950301>. Accessed in September 2020.

8 Available at <https://www.dw.com/pt-br/holanda-ordena-recall-de-m%C3%A1scaras-de-prote%C3%A7%C3%A3o-da-china/a-52950301>. Accessed in September 2020.