Health governance of COVID-19 in Milan and Toronto: long-term trends and short-term failures

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ABSTRACT

In this paper, we examine a crisis in the governance of health and care that characterized the regions of Milan and Toronto, which the COVID-19 pandemic impacted substantially—both in early 2020 when SARS-CoV-2 first hit and later in the fall and winter when the disease entered its second and third waves. We analyze restructuring in health and care in both regions, and, where necessary, in national contexts. We make the case that restructuring and implementing welfare and health policy, including long-term care, in Toronto and Milan in the context of long-standing tendencies of health governance restructuring that were part of a more general rescaling of the regional welfare state be held responsible for the toll COVID-19 levied. **This paper is part of the SPE Theme on the Political Economy of COVID-19.**

KEYWORDS

COVID-19; health care; long-term care; restructuring

Introduction

In this paper, we look at a crisis in the governance of health and care that characterized the regions of Milan, Lombardy, and Toronto, Ontario. These places were subject to substantial health and societal impacts from the COVID-19 pandemic, both early in 2020 when SARS-CoV-2 first hit and later that fall and winter when the second and third waves of the disease washed over those communities.[1] For this analysis, we employ a lens related to urban and regional political economies, with a particular focus on the restructuring in health and care in these regions, and, where necessary, in national contexts. We make the case that restructuring and implementing welfare and health policy, including long-term care, in Milan and Toronto in the context of longstanding tendencies of health governance restructuring that were part of their more general rescaling of the regional welfare state[2] can be held responsible for the toll COVID-19 exacted in these regions.

We adopt a city-regional perspective as both Milan and Toronto are the leading economic engines of their respective countries and core cities of dynamic growth

regions that have undergone major restructuring over the past few decades.[3] In the work that served as the basis for this paper, we recognized the need for and were inspired by the call for comparative work in urban political economy as expressed in pertinent debates in recent critical urban and regional scholarship.[4] But this is not a comparison in strict methodological terms: research for this paper was not structured strategically, in an empirically methodological sense, as a comparison. It was borne of the urge to explain the functionality and failure in highly developed city-regional health systems in the face of the COVID-19 crisis. We show that both systems experienced changes just prior to and well into the pandemic. In empirical terms, early in 2020 and throughout the second and third waves of infection, Milan and Toronto presented themselves as ideal case studies. Already, Toronto and Milan have striking commonalities apart from those arising from the pandemic in so-called normal times: they are, for example, both their countries' financial centres; the largest and second-largest cities of, respectively, Canada and Italy; the core of dynamic economic city-regions; main destinations for immigration to their respective countries; and more.[5]

The authors of this paper have already subjected Toronto and Milan to conceptual and empirical analyses related to urban and regional governance, welfare state restructuring, health care, environmental issues, and other themes.[6] We decided against frontloading this paper with conceptual language from this past work, opting instead to explore the specific narratives that could be disentangled from the expected and assumed realities of neoliberalization. In that sense, we are guided by Jennifer Robinson's call for "creative learning" and "thinking cities through elsewhere"[7] in comparative research, which safeguards against, first, presupposing larger causal processes (as is often done in case studies about neoliberalization, in which neoliberalism is presupposed as an outside process) and, second, against privileging one over other cases in a normative stance that usually privileges the powerful and hegemonic (as is often done by urban researchers from the global North in their work on the Global South). Whereas the latter is less of a problem when comparing a European case study region to a North American one, the former is of heightened importance. The variegated neoliberalisms in (Northern) Italy and (Southern) Ontario are not necessarily treated as the sole or even the primary explanatory factor existing presumably before and outside the health crisis under investigation here. Certainly, the big picture, long-term dynamics of neoliberalism consistently influenced the trajectory of the pandemic everywhere.[8] It is clear that, in both Italy and Canada, the pandemic "served to expose the profound weaknesses of the … welfare state."[9] Health care workers, for example, were taking the brunt of the COVID-19 crisis in an environment generally conditioned by neoliberalization.[10] In the words of Henri Giroux, "The COVID-19 pandemic is exposing the plague of neoliberalism."[11] However, we argue that the reaction to COVID-19 exposed the granular modes through which the crisis was confronted, contributing to a very complex set of effects and outcomes. These neoliberal processes were exacerbated by causes that ranged from lack of preparedness to government incompetence—hubris on the side of those responsible for what they considered mature health care systems—and the effects and outcomes from the acceleration of socioeconomic differentiation and polarization prior to the pandemic, to the dominant racialized landscape of care (especially in the Canadian case). One

could say that, despite the pre-existing hegemony of neoliberal tendencies, there was no script, and some might even argue that there was no script because of that hegemony.

In developing our argument, we first provide regional context, then outline the health governance systems in place before the pandemic to set the stage, and finally examine governance structures and governments' official responses to the pandemic in our Canadian and Italian case-study areas. To understand the policies, communication strategies, and implementation efforts in both city regions, we discuss institutional conditions and administrative reforms in the health care field and the efficacy of information flow between public health actors, governments and the public, and government members themselves. We also question who is being reached and targetted, especially in terms of what we call the social, spatial, and institutional peripheries.[12] The paper ends with a discussion about the linkages between health system architectures and pandemic responses in both case study areas, in addition to the broader impacts of neoliberalization processes.

Toronto and Milan in the context of their regions

During the neoliberal state rescaling of the past few decades,[13] devolutionary tendencies have vied with reconsolidation of higher-level government control both in Canada and Italy.[14] We look at the cities of Toronto and Milan in the context of their regions. When we speak of Toronto and Milan, we refer to those regions unless we specifically discuss individual cities, places, and neighbourhoods within them. There are different geographical, social, economic, and political dimensions that have different consequences in each case, but both share the fact that cities have to be understood as part of a globalized regional geography, economy, society, and polity. The City of Toronto is part of a regional geography that is often called the Greater Golden Horseshoe at the eastern tip of Lake Ontario, an area that had 7.8 million residents in 2016. The economy of that region, while centred on the global city economy of Toronto's financial and information technology sectors, is highly diversified and regionalized with strengths in other sectors, including food and beverage, biomedical and biotechnology, and automotive and aerospace. It is home to several leading institutions of higher education and research, and is a key logistics hub in Canada. Toronto is the country's leading port of entry for immigration and most of the demographic growth and diversification of the region is the result of newcomers, who predominantly settle in the region's burgeoning suburbs. Whereas large municipalities—especially Toronto, Mississauga, Hamilton, and Brampton, or regions such as Peel and York—have increasingly flexed their muscles in political decisionmaking and governance matters, including during the pandemic, the local level of government remains under constitutional control by the provincial government, which has the power to control political institutions, territories, and policy in the governance of cities.

Over the past few decades, Milan has run into a wave of vibrant public-private planning that brought together a large number of real estate investors, community-based initiatives, and microscale and large-scale urban regeneration projects by also

attracting many workers (especially the high-skilled). In this vein, the term "Milan model" has been adopted to describe a well-governed post-Fordist transition.[15] Simply put, after a time of de-industrialization distinguished by a dramatic demographic decline, Milan opened up a new phase of significative and tangible socioeconomic change. Several authors argue that Milan is the Italian city most likely to have experienced an outright process of metropolization from the early 1900s into the post period of the Second World War.[16] In fact, Milan has grown from being a successful northern Italian industrial city into the core of a wider industrial metropolitan region that is home to more than seven million people.[17] The city is a host to excellence in the fields of higher education, health care, and R&D, and it also acts as the Italian capital city of economy, as well as of fashion and design companies. Like Toronto, Milan is fully part of the globalized web of urban geographies, economies, societies, and polities.

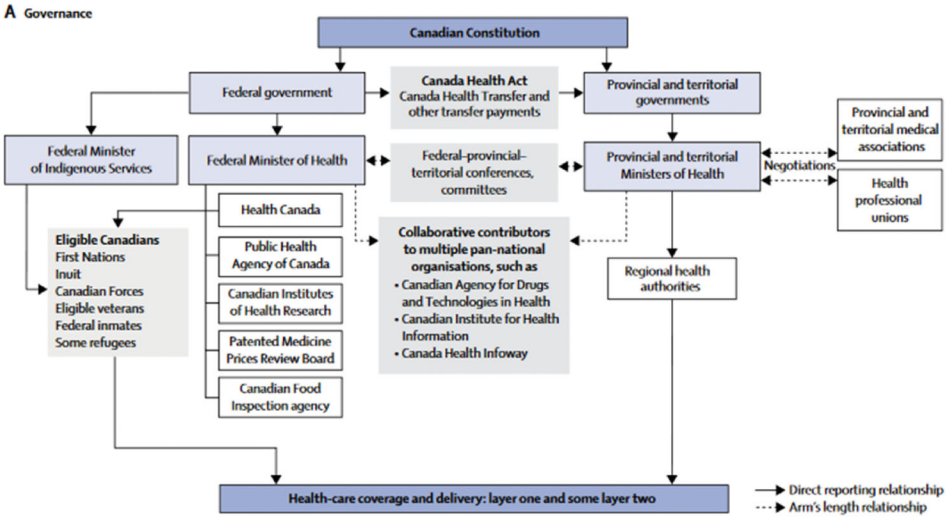
While considerable attention has been devoted to the main nodes of the urban system, as well as to their interlinkages and role in defining urban regions, the periphery that has emerged from extended urbanization—identified with polycentric peri-urban settlements and in-between cities[18]—has had little attention in the new metropolitan agendas. The urban area portrayed today presents nuanced boundaries[19] and a plethora of jurisdictions involved in a large city-region.[20] Under the umbrella of the new institutional-actor-denominated "Metropolitan City," established in 2014, some recent planning attempts have been put in motion, especially in the field of (sub)urban regeneration on specific target areas.[21] This is the case of the project "Periferie al Centro" in the in-between municipality of Pioltello, which aims to improve living conditions and welfare service provision in a multicultural neighbourhood of the town.[22] Although encouraging, such experiments still look episodic and fragmented, and there is a long way to go for a comprehensive governance agenda based on a city-region rationale.

Health governance before the pandemic

To grasp the impacts of the COVID-19 pandemic and make sense of the links between health system architecture and the pandemic response, it is necessary to understand the existing systems' histories.

Regionalization of health care in Ontario

Canada has a universal health care system, called Medicare, with most health care services covered under the Canada Health Act (Figure 1), which "remains Canada's best-loved social program."[23] It is considered "Canada's most redistributive social programme and an often-deployed marker of Canadian difference from the United States,"[24] as well as a sector of good employment, particularly for women, a system of cost control in health care, and a basis for the country's international competitiveness.[25] Covered universally—if unevenly and increasingly less so—are hospitals, physicians, and diagnostics, with notable exclusions addressed through uneven combinations of private insurance and public funding that differ by province and territory to cover prescription drugs, home and long-term care, and mental health



B Coverage

	Services	Funding	Administration	Delivery
Layer one Public services (Medicare): all public funding	Hospitals Physicians Diagnostics	Public taxation	Universal single-payer systems Private self-regulating professions	Private professional for-profit and not-for-profit facilities, and public arm's length facilities
Layer two Mixed services: combination of public and private funding	Prescription drugs Home care Long-term care Mental health care	Public taxation Private insurance Out-of-pocket payments	Public coverage is targeted Public regulation of private services	Private professional for-profit and not-for-profit facilities, and public arm's length facilities
Layer three Private services: almost all private funding	Dental care Vision care Complementary medicine Outpatient physiotherapy	Primarily private insurance, out-of-pocket payments, with some public taxation	Private ownership Private professions Limited public regulation	Private professional for-profit facilities

Figure 1. Overview of the Canadian health system divided into governance and coverage. *Source*: Martin et al., "Canada's universal health-care system: achieving its potential."

care. Other health care services, such as dental and vision care, complementary medicine, and outpatient physiotherapy are available through private insurance.[26] Uneven coverage of these latter categories also differs in relation to one's status as living on welfare, being over the age of 65, and/or on disability support; it also differs by province/territory. The continued independence and power of doctors (characterized as private practitioners) have been a limiting factor in Medicare's effectiveness; the availability of private health care services and insurance has added to the unevenness, as have unstable and insufficient funding, and inadequate coverage for home care and long-term care as well as pharmacare.[27] Not "a perfect system, nor … perfectly equitable," Medicare has "reinforced the focus on treatment and cure over prevention and health promotion by funding these services rather than others."[28]

Health care is, as these instances demonstrate, "less a true national system than a decentralized collection of provincial and territorial insurance plans covering a narrow basket of services, which are free at the point of care."[29] While funded by the Federal government (through the Canada Health Transfer and other fiscal transfers), health care and its administration are a provincial responsibility. Over the years, the health care system has been subject to distinct and complex processes of state rescaling in which, while "the central government's role has been preserved … it oversees a changed health-care system."[30] Whereas such rescaling processes are in line with general

developments in Western welfare states, they are also subject to, avenues for, and products of "changes in the strength of social forces" in a particular context and conflictual citizen-state relationships, identities, and citizenship.[31] While it has been argued that during the past 70 years, a "defederalization of Canadian health policy" has taken place with "a federal emphasis on efficiency and pan-Canadian citizenship in the early 2000s,"[32] the strong federal bias and implied lack of decisiveness and coordination among levels of government has sometimes been cited as problematic in the COVID-19 response.[33]

Although, admittedly, senior government influence on health care policy and delivery has been "resilient" in the decentralized Canadian health care state architecture,[34] subregional inequities in health care funding have been a constant subject of political conversation during the pandemic, especially in hotspots such as suburban Peel Region, west of Toronto.[35] Furthermore, the Canadian health care system has long been critiqued for not prioritizing social determinants of health,[36] leaving this important domain to underfunded local public health units. The governance of particular institutions that have become COVID-19 hotspots—long-term care homes in particular—must be counted as part of regional concerns, and in Ontario, under the jurisdiction of the province, its sole source of funding. Ongoing coordination issues, fragmentation, and compartmentalization specific to health care governance were well known at least since the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003.[37] The addition of budget cuts and an "exodus of public health leaders" before the pandemic, however, had further weakened the state of preparedness in the province.[38]

Regionalization of health care in Lombardy

Historically, Italian health care was based on a universal model sustained by national law-making to ensure fair service provision, and financed through taxes and social security revenues. On the organizational side, the public health system relies on a multilevel division of responsibilities from the central State to the local authorities. Since the introduction of the National Health System (hereinafter SSN) in 1978, regional authorities have been responsible for health care and the organization of local health units, originally called *USL – Unità Sanitarie Locali*, then renamed *ASL – Aziende Sanitarie Locali* in 1992. Between the 1990s and 2000s, during a vibrant reform period, a central role was increasingly attributed to the Regions (akin to Canada's provincial level of government). In particular, the Constitutional reform of Title V in 2001 entrusted health care protection to concurrent legislation between the State and the Regions, whereby the State only preserved legislative competences and the local authorities saw an extension of their roles in the organization and management of health care services. But this localism has resulted in a "regionalist drift" characterized by 21 different unequal and unevenly developed regional health services. Each region has sufficient autonomy to decide whether to pursue the implementation of private-based specialist centres (which, in view of the decisionmakers, are able to attract resources, users, and investments), or to maintain a

fair system of health care protection and prevention of care relying on both public and private structures. Against this background, inequalities of care in Italy arise from the binary public-private dualism, where SSN seems unable to contrast the growing social needs of an increasingly ageing society, even in view of the low birth rate of 1.27.[39] Furthermore, Italy is a well-known case in which the care needs of dependant older adults are covered to a large extent by families and informal networks, partially supported by cash for care schemes, especially the Attendance Allowance (a universal, unconditional cash for care scheme).[40]

Developed since the 1980s, the Italian public long-term care system for older people comprises four separate policy programmes that are underpinned by three parallel silos of government activity: health care (which is the responsibility of the regional governments), social care (under the remit of around 8,000 municipalities), and attendance allowances (administered by the national government).[41] In general, despite the relevance of a care system for elderly people in an aged country, the goal of achieving an appropriate level of long-term care services to meet population needs is still far from reach.[42]

Besides a scheme that places responsibility for older adult care on families and informal networks, a recent history of disinvestment in public infrastructures has affected the Italian landscape of care. According to *Osservatorio GIMBE* (a health care research think tank), between 2010 and 2019, public defunding to SSN amounted to approximately €37 billion. By pursuing "hollowing-out the state" strategies,[43] Lombardy exemplifies the process wherein state responsibilities have moved sideways, with health services increasingly provided by private bodies or public-private partnerships. As introduced, the accreditation system enables private-based infrastructures to ensure public services and surgeries financed by the public authorities, given the simple fact that famed and well-known doctors often work in private centres. From a policy perspective, as Nikos Kapitsinis recently argued, persistent efforts to rollback welfare since the 1980s appear to have played an important role in the strategies used to mitigate the impacts of COVID-19.[44] Many European governments, including that of Italy, have accelerated privatization, amplifying existing sociospatial inequalities[45] that are also manifested at the regional level across the European Union (EU).[46] Kapitsinis shows the significance of regional inequalities in terms of access to health services, confirming that regions with a number of hospital beds less than the EU average (465 beds per 100,000 residents) exhibited much higher mortality than regions with more than the average. Similarly, regions with fewer medical doctors than the average (413 doctors per 100,000 inhabitants) witnessed higher mortality rates than areas with more doctors.[47]

Governance structures + official responses to the pandemic

With these recent histories of regionalization and neoliberal tendencies, we now outline the pandemic response in both case study regions and highlight the connections between the histories and events that transpired through the first, second, and third waves of the pandemic.

Toronto/Ontario during the pandemic

Ontario's health governance structures during the COVID-19 pandemic have been highly centralized and top-down in nature (see Figure 2). A provincial Command Table was set up during the beginning of the pandemic to provide executive leadership and strategic direction to guide Ontario's COVID-19 response. According to provincial documents, the Command Table is supposedly comprised of Ontario's Chief Medical Officer of Health, high-ranking bureaucrats in specific ministries (Ministry of Health, Ministry of Long-Term Care, Ministry of Labour, Training and Skills Development) and agencies (Ontario Health, Public Health Ontario), as well as external expertise from the University of Toronto.[48]

There has been, however, a considerable lack of transparency regarding who exactly is advising the government's COVID-19 response, raising concerns over lack of accountability and oversight.[49]

In addition to Ontario's performative and often contradictory centralized response to the COVID-19 pandemic, we have witnessed some informal health governance bodies—generally excluded from any formal institutional structure—emerge at the regional level. Sometimes the government itself appeared to encourage local and regional initiatives in an attempt to shift responsibilities for tougher measures to the lower levels of public health governance.[50] For instance, Mayors and Regional Chairs from the 11 largest municipal governments across the Greater Toronto and Hamilton Area formed a roundtable and met regularly to discuss the impacts of COVID-19 on the region, including the implementation of public health measures and the looming budget crisis facing municipalities. Mayors and regional chairs discussed the possibility of including more stringent public health measures for high-risk establishments such as bars, restaurants, and gyms, and lobbied the province to issue a mandatory masks

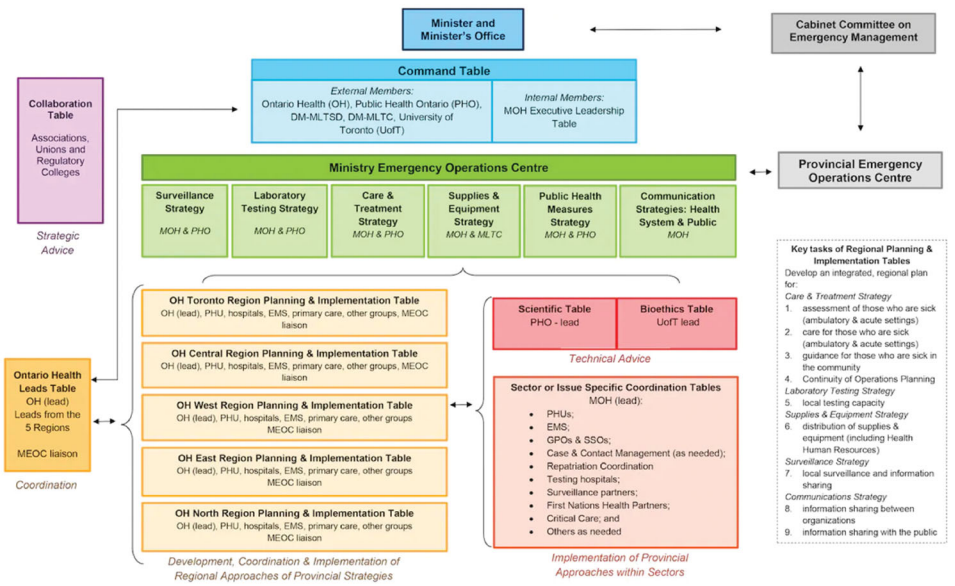


Figure 2. Governance structure of COVID-19 response in Ontario. *Source*: Ontario Ministry of Health (2020).

measure for large municipalities.[51] At times, regional officers of health acted in concert, as was the case when Dr. Eileen de Villa, Medical Officer of Health, City of Toronto, and Dr. Lawrence C. Loh, Medical Officer of Health in neighbouring Peel Region, on February 13, 2021 wrote a joint letter to Dr. David Williams, Chief Medical Officer of Health for the province of Ontario, to request that the government extend stricter lockdown measures for Toronto and Peel Region at least until March 9, longer than originally intended by the province.[52] This was significant because the combined urban populations of Toronto and Peel account for almost 4.4 million people. The inner suburban neighbourhoods of the core city and large swathes of the immigrant outer suburbs in Brampton and Mississauga, both municipalities in Peel Region, were hard hit by infections and deaths (Figure 3). From the start of the pandemic into the second and third waves, this was a persistent pattern, with 60,000 cases and 600 deaths in Peel and 94,000 and 2,500 deaths overall in those health regions and with a higher number of cases in the identified regions.[53] This pandemic outcome is aggravated by the uneven regional geographies of health care in Ontario, which concentrate the most sophisticated health care institutions and services in a few city blocks in downtown Toronto, with the negative externality of insufficient funding and infrastructure of care in the peripheries.[54]

From an infrastructure-of-care perspective, attention was immediately paid to acute care hospitals, leaving long-term care with inadequate access to personal protective equipment and delaying the restrictions to one institution for its employees until a month after the pandemic began.[55] Lessons already learned from SARS that restricted health care workers to one institution to prevent community spread were not applied. The peripheralization of these sites by health care authorities and government in terms of supplies, staff, and adequate protection protocols, combined with ageism and ableism and a history of neglect,[56] led to catastrophic consequences. The Canadian military documented the horror of abuse, neglect, cruelty, and death in Ontario long-

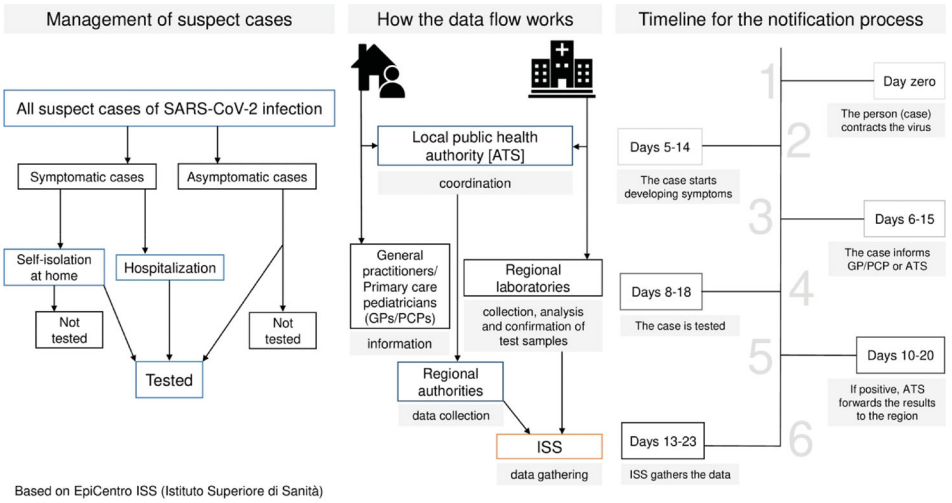


Figure 3. COVID-19 integrated surveillance system in Italy. *Source*: author's, based on ISS (*Istituto Superiore di Sanità*).

term care[57] with a journalist linking 16,739 out of 22,959 deaths to those living in residential care facilities as of March 31, 2021.[58]

There was also a strong, coordinated effort to request emergency financial support for municipalities from the federal and provincial governments. In Ontario, municipalities exist under provincial legislation and have a constitutional relationship with the provincial government, which ultimately has control over municipalities. The regional roundtable began advocating for the federal and provincial governments to put constitutional and jurisdictional issues aside in order to support municipalities as quickly as possible.[59] During this time, the Province of Ontario's official response to the pandemic was marred by a loss of institutional expertise/knowledge gained during the 2003 SARS public health crisis, as well as the various case and contact tracing/information system issues, which, we believe, hindered the province's response to the pandemic.[60]

Public Health Ontario (PHO), an arm's-length agency set up in response to Ontario's battle with SARS and other public health crises (such as the Walkerton E. coli outbreak and Mad Cow Disease), suffered an exodus of senior leadership and expertise in the years leading up to the COVID-19 pandemic. Some were pushed out by budget constraints or organizational restructuring brought in by the provincial Conservative government. This loss of experience and expertise left PHO understaffed and ill-prepared in several areas that were crucial to the province's pandemic response. Specifically, the province has been criticized for its data collection efforts: until 2019, PHO had its own senior-level data collection expert, but this position was terminated and has not been replaced. The agency also lost one of the country's leading experts in crisis communication, whose role was to train municipal public health units and officials about how to speak to the public about health risks.[61]

In the aftermath of the 2003 SARS crisis, Keil and Ali note that the provincial government began to upgrade their outdated health communication system, which was causing significant problems related to sharing case information during the outbreak.[62] Data from one hospital could not be shared directly with other hospitals in the GTA, nor with the province's Ministry of Health. History would repeat itself during the COVID-19 pandemic. Ironically, and despite this failure during SARS, communication at the provincial level has remained a major weakness during the COVID-19 pandemic. Ontario's Chief Medical Officer of Health, Dr. David Williams, has been criticized for his dry and convoluted messaging, while Premier Doug Ford has been criticized for speaking about medical and scientific matters and, at times, for providing advice that contradicted that of his medical professionals.[63]

In addition, Ontario's most recent information system, the Integrated Public Health Information System (iPHIS), once again failed to meet the needs of public health. iPHIS came under fire early for under-reporting COVID-19 cases and deaths,[64] leading to an increased administrative burden and ultimately causing delays for time-sensitive case management and contact tracing efforts.[65] iPHIS does not have the ability to link local public health units directly to Ontario's Laboratory Information System (OLIS). To make up for this deficiency, Ontario's COVID-19 reporting requirements stipulate that final test results are reported back to the ordering health care provider. Positive COVID-19 test results are then sent by the health care provider to the relevant local

public health unit. However, lab results are often sent via fax causing local public health units to enter patient results by hand before starting case management, a process that might take days.[66] This complex reporting process resulted in significant setbacks for the province's public health response. In one instance, a Toronto hospital completely failed to flag 700 positive COVID-19 tests to local public health units, and this mix-up meant that thousands of close contacts could not be traced.[67] Toronto Public Health decided to scrap the system entirely and build a new information system, the Coronavirus Rapid Entry System, in its place.[68] Eventually, under criticism, the Ontario government began rolling out a new province-wide, cloud-based information system in time for an anticipated second wave.[69]

As the second wave took hold, and even more so when the third wave rolled across the province in the Spring 2021, multiple parts of Ontario and Greater Toronto's pandemic response systems became overwhelmed. Toronto Public Health, the region's largest local public health unit, was forced to scale back contact tracing for the general public and selectively focus its efforts on outbreaks in hospitals, long-term care homes, retirement homes, homeless shelters, schools, and childcare settings.[70] Furthermore, the province's testing and laboratory system was not equipped to handle the increase in testing demand, which led to long wait times outside of assessment centres and a considerable backlog of tests waiting to be analyzed. This prompted the province to narrow testing parameters at assessment centres, change protocols for sick students, and move from a first-come-first-serve testing model to an appointment-based testing model to try and reduce the record high backlog.[71] The province was given months to prepare and fortify both the contact tracing and testing system, by hiring additional contact tracers and expanding lab testing capacity, to handle the second and third waves. This situation was viewed as a critical missed opportunity for provincial leadership, which was forced to revert back to full lockdowns in GTA jurisdictions such as Toronto, Peel Region, and York Region.[72]

Milan and Lombardy region during the pandemic

The large majority of Southern Europe is characterized by a "vicious layering" of multilevel governance systems,[73] an aspect that was highlighted by the pandemic. In Italy, for instance, the slow response to the pandemic emergency reflected the country's volatile political system and tense central-regional relations. The national framework to confront the COVID-19 pandemic was issued by the Italian Ministry of Health with the Circular no. 1997 of January 22, 2020, to set out the first criteria and methods for reporting SARS-CoV-2 infections, in conjunction with the Department of Infectious Diseases of the Higher Health Institute (ISS – *Istituto Superiore di Sanità*). Subsequently, on February 27, 2020, the Civil Protection (*Protezione Civile*) entrusted the epidemiological and microbiological surveillance for COVID-19 to the ISS. Within this coordination, each region is required to communicate data on laboratory-confirmed infected cases to the ISS on a daily basis, through a dedicated Information Technology (IT) platform that allows data to be either collected through a web interface linked to the platform or sent directly as datasets.[74] A broader overview of the three main features of the integrated surveillance system is illustrated in Figure 3. The

diagram on the left shows the general management of suspect positive cases, whereas the other two refer to the coordination and gathering of data, divided into the sequence of the data flow process and the timeline to treat a suspected case from the contraction of the virus to the notification of positivity to ISS.

Since the beginning of the pandemic, the Lombardy region has represented the epicentre of the contagion in Italy, counting regularly the highest R_t effective reproduction number. By November 5, 2020, of the 40,192 deaths resulting from COVID-19 in Italy, 17,987 were reported in Lombardy, equal to 44.75% of the total amount, and the R_t was above two, meaning a high alert and, in short, a fast spread of the virus. The trend of the contagion is monitored by an institutional dashboard illustrating the regional overview, a provincial subdivision, and a focus on the 300 most affected municipalities.[75]

As noted by Paolo Peduzzi, a number of critical issues can be observed.[76] First, an incorrect setting of data-gathering underestimated the number of positive cases and deceased. To verify the increase of total mortality compared to previous years, the local newspaper *L'Eco di Bergamo*, with a private research and data analysis company, conducted an investigation among all 243 municipalities of the Province of Bergamo: 91 administrations have answered the call so far, representing 607,000 people, which is more than 50 percent of the total population (reaching 70 percent in the following months). The inquiry revealed that the real death toll in March 2020 reached 4,500 in the Province of Bergamo, thus being far higher than officially reported (at 2,060). The research also confirms how a specific area (Val Seriana, a valley to the northwest of Bergamo) was at the core of the outbreak, with 45.5% of infected cases.[77]

Second, there was a failure to provide adequate protection tools to family doctors across the territories, together with general poor management of public sanitation. Third, and related to the second point, delays in localized quarantine measures were reported, in particular with reference to the case of Alzano Lombardo, a town of Val Seriana, in the Province of Bergamo. The area was not locked down until March 8, two weeks after the first documented cases at the small *Pesenti Fenaroli* hospital of Alzano Lombardo, on February 23, 2020. After the identification of the outbreak area in the town of Codogno, 11 municipalities in the Province of Lodi (south of Milan) were promptly isolated by virtue of the first ministerial decree in the COVID-19 response. Nonetheless, no emergency guidelines and no other "hotspots" (*zone rosse*) were identified, although some doctors from the hospital warned decisionmakers about an increasing hospitalization rate as a result of unusual pneumonias.[78] Delays in recognizing SARS-CoV-2 in the few infected patients admitted to the small hospital in Alzano Lombardo—and delays in activating measures to protect other patients, hospital personnel, and visitors, as well as in implementing adequate containment measures in patients' villages—allowed the virus to spread rapidly and into the city of Bergamo.[79] Outside Bergamo, the virus spread among the dense productive areas scattered across the province, by also travelling, for instance, on transit networks, such as the Bergamo-Albino trolley car that crosses Val Seriana.[80] It is increasingly safe to say that the COVID-19 pandemic has spread through mass travel and transport.[81] A fourth key critical issue refers to the chaotic management in providing guidelines to doctors

and medical staff in long-term care homes (named RSA, *Residenze Sanitarie Assistenziali*, in the regional framework of Lombardy).[82]

Although the Lombardy region has found itself confronted by an unprecedented emergency, a number of experts attribute the problems to a longstanding retrenchment of the public care framework involving the inability to allocate reasonable resources to prevention, lack of preparedness, and a "territorial organization" of health care, according to the regional institutional scheme. During the first wave of the pandemic, doctors from the public hospital Papa Giovanni XXIII in Bergamo underlined how the critical situation of an uncontrolled hospitalization of positive cases of COVID-19 was a consequence of a weak development of fair and equal community-based approaches in favour of specialized improvements.[83] By observing the difficulties faced by Lombardy's health care system, on April 5, 2020, the Regional Federation of Medical Orders for Lombardy Region (*Federazione Regionale degli Ordini dei Medici della Lombardia*) pointed out how "public health care and territorial medicine have been neglected and unenforced," as highlighted, for instance, "by the absence of strategies related to territorial and population management."

The second wave in the fall of 2020 exacerbated the tensions between central and regional governments. As of November 2020, restrictions were applied on a regional-based rationale, adopting more stringent measures for the regions with the highest number of infected cases by relying on the R_t coefficient (where an R_t above 1.50 entailed the strictest restrictions). While the first wave severely hit the province of Bergamo and also the provinces of Cremona, Lodi (where the virus officially started to spread), and Brescia, the "second wave" hit the core of Milan's urban region and neighbouring provinces of Monza and Brianza, a dense constellation of towns inhabited by 871,735 people (see Figure 4). This new scenario seems related to a key

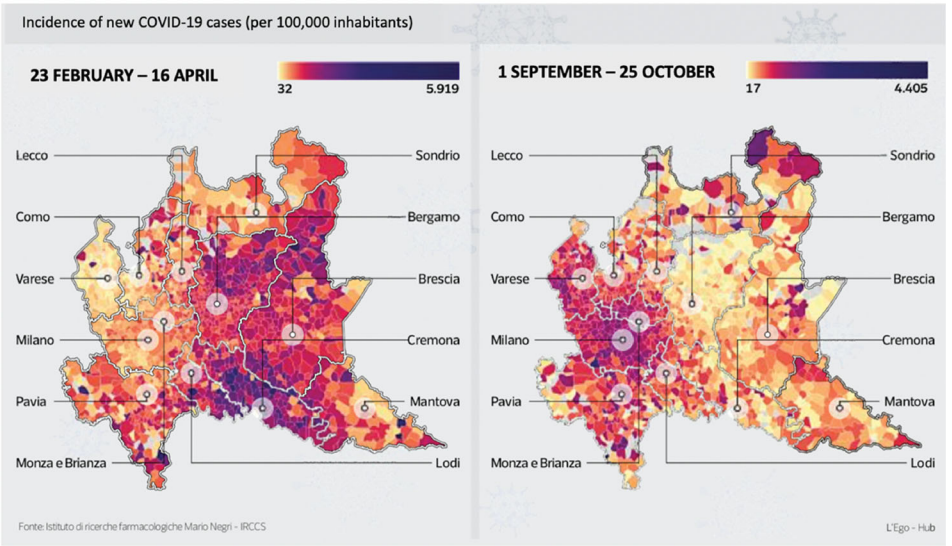


Figure 4. Differences in new cases' concentration between the first wave (left) and the second wave (right) in the Lombardy region. *Source*: *Istituto di ricerche farmacologiche Mario Negri*; retrieved from *Corriere della Sera*, November 11, 2020.

finding reported by *The Economist*: municipal data from the province of Bergamo reveal signs of partial population-level immunity.[84]

Governmental responses in Italy are facing an unprecedented crisis, where the traditionally solid and well-developed regional health care of Lombardy has proven to be very fragile, crystalizing the outcomes of a long phase of public health reconfiguration.

Discussion

Both Canadian and Italian health care systems have been well regarded—Canada is typically seen as a global example, particularly in contrast to the United States, and Italy has a reputation for specialized medicine. These systems, however, were not well prepared to deal with the COVID-19 pandemic. In this paper, we argue that, in both Toronto/Ontario and Milan/Lombardy, the COVID-19 pandemic encountered fertile ground in the institutionally restructured political economies and geographies of health care, which ultimately led to a lack of public health preparedness and their weakened response to COVID-19 during the first and second waves in 2020 and early 2021. This crisis of care in the Milan and Toronto urban regions during the COVID-19 pandemic has laid bare concretely where the worst infections and deaths occurred, and conceptually how the welfare state had evolved during decades of neoliberal policies.[85]

In comparing these two jurisdictions from a governance of health care and health policy perspective, we demonstrate how the welfare states of two industrialized nations have been influenced by decades of policies effecting austerity and new public management reforms, often leading to overlapping and badly coordinated jurisdictional responsibilities in rapidly expanding and diversifying urban regions. Those changes, often identified with neoliberal state reform and rescaling, weakened the foundation for resistance to the COVID-19 pandemic. The fragmentation of health care into privately delivered/publicly funded, privately funded/delivered, and publicly funded/delivered systems has led to coordination issues during the pandemic, not to mention the horrible neglect of spatially and socially segregated facilities, such as long-term care. While it may be argued that most countries during the pandemic have experienced problems related to preparedness, it is important to point to the particular failures (and successes) related to the weaknesses and strengths of policies and actions of particular governments. Countries such as New Zealand (with similar highly developed health systems compared with Italy and Canada) initially fared much better during the pandemic, eliminating novel cases by May 2020.[86]

As demonstrated in both contexts (albeit in different ways), there is a disconnection between different scales of health governance that has been dictated institutionally and historically, and that has been impacted by broader trends of neoliberalization and downloading. These disconnections were also amplified by diverse perspectives on appropriate public health measures by different levels of government. The Toronto/Ontario context also had diverse spatial coverage by different scales of regional governance (LHINs vs. PHUs) and diverse expert "tables" created to provide often contrary advice to politicians at all levels. In both contexts, these disjunctures had devastating consequences during COVID-19 in terms of public health messaging,

lockdown restrictions, and mismanagement of contact tracing and case reporting. In Toronto, this disjuncture between scales of health governance existed, despite ostensibly learning from SARS in 2003 and the creation of a provincial entity to manage these kinds of emergencies. Nonetheless, the ability of these institutions to deal with the crisis was severely hampered by systematic defunding and loss of public health expertise a few years before the pandemic.

Looking at the types of health care that are publicly funded in both contexts, there is a focus on physician-based services, such as hospitals and specialist procedures, with little funding for community-based approaches, which target the social determinants of health, such as structural racism, ableism, ageism and sexism, environmental injustice, poverty, inadequate housing, employment, and so on. This focus on biomedical approaches to health without appropriate funding for population approaches to health and well-being has led to serious inequalities,[87] which were further exacerbated by the COVID-19 pandemic: that is, it disproportionately affected those in our social and spatial peripheries, such as racialized, poorer, older, and disabled populations.[88] The continued defunding and destaffing of institutions responsible for population health have been shown to be a dire mistake. Further, there is a need to expand definitions of health within governance structures to include the social determinants of health. How health is defined within governance structures dictates what gets funded. We need to expand the definition of health in order to robustly fund social programs that address health inequalities exacerbated by the COVID-19 pandemic—those aimed at eliminating poverty, improving employment conditions, increasing the supply of affordable housing, and providing adequate income and care supports in community for disabled individuals and older adults. The development of such policy must occur in close consultation with the affected communities in order to be successful. Communities that have been marginalized socially, spatially, and institutionally from public health systems, as well as policies in relationship to them, must be transformed to provide positive links of bona fide collaboration and codetermination. In Canada, such a movement towards (contested) participation in health policy has been visible in the work of organizations such as the Black Physicians Association of Canada and the Alliance for Healthier Communities.[89] The Alliance for Healthier Communities is directly involved in the "Social Prescription" movement, acknowledging that health and well-being go beyond a medical diagnosis, and involve physicians and health teams working to recommend and connect patients to nonclinical, local services that address the social determinants of health.[90]

Conclusion

Overall, this paper speaks to the changing political economies and sociospatial arrangements in expanding urban regions. As the leading economic engines of their respective regions and as a result of neoliberal policies, specialized medicine and hospitals have become centralized in Toronto and Milan. This focus on the centre as a location for investment in health infrastructures has negative consequences for spatial peripheries, which have become less likely to have those health infrastructures (among a lack of other infrastructures) and are more likely

to be home to those who are living in poverty and systematically marginalized. Governance decisions about location, funding, and supports affected these areas, which ended up being hotspots during the COVID-19 pandemic in Toronto and Milan. This paper thus demonstrates the impacts of neoliberal institutional and historical governance on the political economies of health care that led to a poor pandemic response as well as outsized impacts of COVID-19 on people living on sociospatial peripheries.

Notes

1. Biglieri *et al.*, "City as the Core of Contagion?"; De Vidovich *et al.*, "The View from the Socio-Spatial Peripheries."
2. Ali and Keil, *Networked Disease*; De Vidovich, "Governing local welfare at the urban edges"; Gori, *Come Cambia Il Welfare Lombardo.*
3. Keil *et al.*, *Governing Cities*; Paris and Balducci, *Practising a Polycentric (Post)Metropolis.*
4. For example, see McFarlane, "The Comparative City."
5. Keil *et al.*, *Governing Cities Through Regions*; Paris and Balducci, *Practising a Polycentric (Post)Metropolis.*
6. Addie and Keil, "Real Existing Regionalism"; De Vidovich, "Governing local welfare at the urban edges"; Keil *et al.*, *Governing Cities Through Regions.*
7. Robinson, *Ordinary Cities*, 7; Robinson, "Thinking Cities Through Elsewhere."
8. Fanelli and Whiteside, "COVID-19, Capitalism, and Contagion"; Navarro, "The Consequences of Neoliberalism in the Current Pandemic."
9. Bryant, Aquanno, and Raphael, "Unequal Impact of COVID-19."
10. Brophy *et al.*, "Sacrificed."
11. Giroux, "The COVID-19 Pandemic is Exposing the Plague of Neoliberalism."
12. Biglieri *et al.*, "City as the Core of Contagion?"
13. Brenner, "New Urban Spaces."
14. Parker, "The Resistible Rise of Italy's Metropolitan Regions"; Keil et. al., *Governing Cities Through Regions*.
15. Andreotti and Le Galès, "Introduzione. Governare Milano nel nuovo millennio."
16. Balducci *et al.*, "Milan Beyond the Metropolis."
17. OECD, *OECD Territorial Reviews*.
18. De Vidovich and Scolari, "Seeking Polycentric Post-Suburbanization."
19. Bolocan Goldstein, "Confini Mobili. Sviluppo Urbano e Rapporti Territoriali Nel Milanese."
20. Perulli, "Nord: una città-regione globale."
21. Paris and Pezzoni, "Rigenerare Il Territorio, Disseminare Le Progettualità."
22. De Vidovich and Bovo, "Post-Suburban Arrival Spaces and the Frame of 'Welfare Offloading.'"
23. Armstrong and Armstrong, *About Canada*, 3.
24. Graefe, "State Rescaling," 175.
25. Armstrong and Armstrong, *About Canada*, 31–3.
26. Martin, *et al.*, "Canada's Universal Health-Care System."
27. Armstrong and Armstrong, *About Canada*, Chapters 3 and 4.
28. Armstrong and Armstrong, *About Canada*, 33.
29. Armstrong and Armstrong, *About Canada*, 1718.
30. Graefe, "State Rescaling," 179.
31. Graefe, "State Rescaling," 176.
32. Graefe and Bourns, "The Gradual Defederalization."
33. Saunders, "Canada is Failing the Second-Wave Test."
34. Graefe, "State Rescaling," 177.
35. Goldman, "What's Really Behind Rising Numbers"; Wilson, "Peel Region Faces a Different COVID-19 Battle."

36. Martin *et al.*, "Canada's Universal Health-Care System."
37. Ali and Keil, *Networked Disease*; Ng, "Globalization of SARS"; Teo *et al.*, "Surveillance in a Globalizing City."
38. Warnica, "Staff Losses Didn't Hurt Care."
39. Istat, 2019.
40. Arlotti et. al., "Politiche di LTC e Disuguaglianze nel Caso Italiano."
41. Gori, "Changing Long-Term Care Provision."
42. Gori, "Changing Long-Term Care Provision."
43. Rhodes, 1994.
44. Kapitsinis, "The Underlying Factors of the COVID-19 Spatially Uneven Spread."
45. Forster *et al.*, *Health Inequalities in Europe.*
46. Hadjimichalis, "Uneven Geographical Development"; Humer and Palma, "The Provision of Services"; Iammarino *et al.*, "Regional Inequality."
47. Kapitsinis, "The Underlying Factors of the COVID-19."
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49. Gatehouse, "Ontario's Doug Ford Says He Relies on COVID-19 Experts."
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51. Crombie, "GTHA Mayors"; Freeman and Herhalt, "Province Declines to Make Masks Mandatory Indoors."
52. City of Toronto, Medical Officer of Health Letter.
53. Figures for February 19, 2021; https://www.peelregion.ca/coronavirus/case-status/; and https://www.toronto.ca/home/covid-19/covid-19-latest-city-of-toronto-news/covid-19-status-of-cases-in-toronto/.
[93] Kerr, "Why Brampton has Become a Hot Spot."
54. For full coverage of this story and mapping, see Bascaramurty and Bhatt, "Impossible Choices."
55. Crawley, "Delays, Conflicts, and Confusion."
56. Iacobelli *et al.*, "COVID-19 and the Forgotten Densities of Long-Term Care"; Parekh and Underwood, "Coronavirus Crisis Shows Ableism Shapes"; Nash and Schnarrs "Coronavirus Shows How Ageism is Harmful to Health of Older Adults."
57. Phrimmer, 2020.
58. Loreto, "Of the 22,959 people who have died in Canada from COVID-19, I've linked 16,739 to 1628 residential facilities … "
59. Eisenberger, "GTHA Mayors and Chairs."
60. Warnica, "Staff Losses."
61. Warnica, "Staff Losses."
62. Keil and Ali, "Governing the Sick City."
63. Arthur, "If Trinity Bellwoods Park Befuddled our Leaders."
64. D'Mello, "Ontario Admits COVID-19 Death Toll Is Significantly Higher."
65. De Villa, "COVID-19 Response and Recovery."
66. De Villa, "COVID-19 Response and Recovery."
67. Crawley, "Delays, Conflicts, and Confusion."
68. Gibson, "Ontario Government Warned of Issues."
69. Wallace and Tubb, "After Months of Criticism."
70. Chisholm, "Contact Tracing is a Key."
71. Warnica, "Staff Losses"; DeClerq, "New COVID-19 Testing Rules."
72. Stone and Gray, "Ontario Expands COVID-19 Partial Lockdown."
73. Arlotti and Aguilar-Hendrickson, "The Vicious Layering of Multilevel Governance."
74. Information retrieved from ISS official website on COVID-19 integrated surveillance system: https://www.epicentro.iss.it/en/coronavirus/sars-cov-2-integrated-surveillance.
75. Regional dashboard on COVID-19 contagion by *Regione Lombardia*: https://www.regione.lombardia.it/wps/portal/istituzionale/HP/servizi-e-informazioni/cittadini/salute-e-prevenzione/coronavirus/dashboard-covid19.

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77. Invernizzi, "Coronavirus, the Real Death Toll."
78. Horowitz, "The Lost Days That Made Bergamo a Coronavirus Tragedy."
79. Fagiuoli *et al.*, "Adaptations and Lessons in the Province of Bergamo."
80. Barcella, "Why Here?"
81. Hall *et al.*, "Pandemics, Transformations, and Tourism."
82. Arlotti and Ranci, "The Impact of COVID-19 on nursing homes"; Bendinelli, "Perché il coronavirus ha fatto strage nelle case di riposo e nelle Rsa lombarde."
83. Nacoti *et al.*, "At the Epicenter of the COVID-19 Pandemic and Humanitarian Crises in Italy."
84. Tozer and Pearce, "The Valleys of the Shadow of Death."
85. Coletta, "Canada's Nursing Home Crisis."
86. Cousins, "New Zealand Eliminates COVID-19"; Binny *et al.*, "Early Intervention is the Key to Success in COVID-19 Control"; Bromfield and McConnell., "Two Routes to Precarious Success."
87. Martin *et al.*, "Canada's Universal Health-Care System."
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