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ARTICLE

# Learning lessons from the COVID-19 pandemic

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## Abstract

This study examines the literature on learning lessons from the coronavirus disease 2019 (COVID-19) pandemic to make a conceptual and empirical contribution. The conceptual contribution suggests a simplified policy transfer framework for learning lessons from the proliferation of approaches involving an expanding and confusing mix of hypotheses, questions, criteria, domains, constructs, factors and criteria. This is then used to review the literature of lessons from COVID-19. This fuses the three reasons for transfer failure and the context-mechanism- outcome configuration of realist approaches to suggest three simple criteria of informed transfer (outcomes); complete transfer (mechanisms); and appropriate transfer (context). The empirical contribution suggests that it is difficult to learn lessons from the existing literature. The conceptual framework suggests that lessons about successful transfer involve a clear idea of policy success, understanding how the policy instrument or mechanism links with success in the original context, and how ‘fungible’ it is to the new context. Put another way, the ‘COVID lessons industry’ may itself need to learn that lessons about policy transfer should be informed, complete and appropriate.

**Key words:** Lessons; literature review; pandemic

## 1. Introduction

The importance of policy learning has been stressed in general (e.g. Vagionaki and Trein, 2020), in health care (e.g. Ellen Nolte and Groenewegen, 2021), and in crisis situations (e.g. Lancaster *et al.*, 2020). The coronavirus disease 2019 (COVID-19) pandemic was unprecedented, with no ‘play book’. However, it may be possible to learn lessons from either the past (e.g. previous pandemics such as ‘Spanish Flu’, MERS or SARS) or from abroad (e.g. other nations). There is certainly no shortage of lessons: a search in April 2022 using the terms ‘COVID AND lessons’ found some 4750 m (Google) and 1050 m (Google Scholar) hits. A ‘COVID lessons industry’ has emerged very quickly, but the lessons industry may itself require some lessons. A review of the early phase of the COVID-19 pandemic, drawing on prospective policy transfer (Mossberger and Wolman, 2003) concluded that the extent of lesson drawing was fairly limited. It was often not fully clear why nations were selected. Many articles were brief and provided limited detail, meaning that there was little depth on issues such as problems and goals and on policy performance or policy success or failure. There was limited discussion of transferability or ‘fungibility’ of lessons, and few clear and specific lessons could be drawn. Finally, the extent to which it was possible to learn lessons in a ‘non-routine’ or ‘less routine’ crisis, under conditions of threat, uncertainty and urgency was generally not discussed (Powell and King-Hill, 2020).

This study aims to make a conceptual and an empirical contribution. The conceptual contribution briefly outlines a number of existing approaches to learning policy lessons, before using ‘Occam’s Razor’ principles to suggest a simplified policy transfer framework for learning lessons. As noted

above, there is a huge and rapidly developing ‘COVID lessons industry’. It would clearly not be possible to examine all this literature, so a tight Web of Science search on ‘Lessons OR Learning AND COVID AND policy’ (title) was carried out to produce apply the framework to an illustrative review of the literature of lessons from COVID-19. The empirical contribution from the application of this framework suggests that it is difficult to extract clear lessons from the ‘lessons literature’.

## 2. Frameworks

A number of diverse approaches, including general frameworks, broad policy transfer/lesson drawing and diffusion studies in health care, point to factors to consider when formulating policy. These approaches are briefly described by means of illustrative authors, ending by suggesting a new, simplified approach that combines the policy transfer and realist approaches into three main factors.

### 2.1 Policy transfer and lesson drawing

There is extensive literature on policy transfer and lesson drawing (see e.g. Williams and Dzhekova, 2014; Baker and Walker, 2019). Rose (1991), who coined the term ‘lesson drawing’, posed the question: ‘under what circumstances and to what extent can a program that is effective in one place transfer to another.’ Rose (1993) set out six hypotheses:

- programs with single goals are more transferable than programs with multiple goals;
- the simpler the problem the more likely transfer will occur;
- the more direct the relationship between the problem and the ‘solution’ is perceived to be, the more likely it is to be transferred;
- the fewer the perceived side-effects of a policy the greater the possibility of transfer;
- the more information agents have about how a program operates in another location the easier it is to transfer;
- and the more easily outcomes can be predicted the simpler a program is to transfer.

Dolowitz and Marsh (1996) suggested a series of questions that may be addressed when studying transfer: Who transfers policy? Why engage in policy transfer? What is transferred? Are there different degrees of transfer? From where are lessons drawn? What factors constrain policy transfer? They later added a further question about how the process of policy transfer related to policy ‘success’ or ‘failure.’ (Dolowitz and Marsh, 2000). Dolowitz and Marsh (1996) claim that a major factor in the transferability of a particular program from one setting to another is complexity. Dolowitz and Marsh (2000) set out three major factors for policy transfer failure: uninformed, incomplete and inappropriate transfer (see below).

Mossberger and Wolman (2003) suggest a framework of rational criteria for assessing the process of policy transfer as a form of prospective policy evaluation, a term coined by Rose (1991, 1993). They propose criteria for assessing policy transfer as a form of prospective policy evaluation: awareness (scope of information; adequacy and accuracy of information); assessment (similarity of problems and goals; policy performance; differences in setting); and application (whether information about the policy in another country is actually used in the decision process).

Williams and Dzhekova (2014) suggested a practical framework for the rapid appraisal of prospective policy measures. They set out four constructs: transferability and adequacy (‘generalizability’); can we expect similar results?; applicability (feasibility) and enforceability in local context; and can it work for us?; ten factors/ criteria; and fifteen ‘questions to ask’.

### 2.2 Institutional transplantation

de Jong *et al.* (2002) present two perspectives of how the transplantation process occurs. First, ‘goodness of fit’ stresses congruence, taking into account political, legal and cultural affinities

and similarities between the donor and host nations. This suggests that a transplant may be rejected by the adopting system if transplanted from a different cultural, legal, political or administrative family of nations. Second, ‘actors pulling in’ pays limited attention to issues of congruence, and suggests that successful transplantation requires a process of creative institutional bricolage in the interaction among policy actors in their adoption process.

### 2.3 Best practices

Radaelli (2004) contrasted de-contextualized best practice or benchmarking with the more interpretative and context-sensitive approach of lesson drawing. He argued that the lesson-drawing literature is aware of the obstacles and limitations of cross-national learning, and stresses the importance of contextualized learning. Conversely, the best practice literature has three limitations. First, it sees the tree but not the forest. Second, it remains rather vague. Third, by focusing exclusively on success, it ignores the useful contribution of negative lessons.

### 2.4 Health care studies

Greenhalgh *et al.* (2004) carried out a systematic review of the diffusion of innovations in service organizations. They identified 13 research areas, largely independently of one another, that provided evidence relevant to the diffusion of innovations in health service organizations (their Table 1). They presented a conceptual model which examined innovation (relative advantage; compatibility; complexity; trialability; observability; Reinvention); adoption by individuals; and assimilation by the system.

Wang *et al.* (2006) pointed to the importance role of the context in which public health programs, as an effective intervention in one setting may be ineffective somewhere else. They discussed applicability (or feasibility, the process of the intervention) and transferability (or generalizability, the outcome of the intervention), defining ‘applicability’ as the extent to which an intervention process could be implemented in another setting, and transferability as the extent to which the measured effectiveness of an applicable intervention could be achieved in another setting. They set out seven questions on applicability and three questions on transferability (their Table 1).

Damschroder *et al.* (2009) drew on Greenhalgh *et al.*’s (2004) synthesis to develop their Consolidated Framework For Implementation Research (CFIR). They considered that many effective interventions fail to translate into meaningful patient care outcomes across multiple contexts. They noted that while there are implementation theories that may promote effective implementation, they overlap considerably in the constructs included in individual theories, and a comparison of theories shows that each is missing important constructs included in other theories. Moreover, terminology and definitions are not consistent across theories. Their CFIR offers an overarching typology to promote implementation theory development and verification about what works where and why across multiple contexts. It is composed of five major domains: intervention characteristics, outer setting, inner setting, characteristics of the individuals involved and the process of implementation. Eight constructs were identified related to the intervention (e.g., evidence strength and quality), four constructs were identified related to the outer setting (e.g., patient needs and resources), 12 constructs were identified related to the inner setting (e.g., culture, leadership engagement), five constructs were identified related to individual characteristics, and eight constructs were identified related to the process (e.g., plan, evaluate and reflect).

Buffet *et al.* (2011) explored methods to assess the transferability of evidence and interventions in the field of public health policy. They considered transferability (generalizability) and applicability (feasibility) criteria.

Ellen Nolte and Groenewegen (2021) explored how to transfer service and policy innovations between health systems? They pointed out that as each system is organized, governed and financed differently, what works in one place will not work identically in another. They went on to argue that the main conditions for and determinants of successes and failures in transferring service and policy innovations included factors such as a good understanding of the main

**Table 1.** Framework for learning lessons: Informed transfer/Outcomes; Complete transfer/Mechanisms; Appropriate transfer/Context

Studies	Informed transfer? (Outcomes)	Complete transfer? (Mechanisms)	Appropriate transfer? (Context)
Rose (1993): 6 hypotheses	Simple goals	Direct relationship between problem and solution	Predicted outcomes in other settings
Dolowitz and Marsh (1996, 2000): 7 questions		Complexity	
de Jong <i>et al.</i> (2002)			Goodness of fit
Mossberger and Wolman (2003): 6 criteria	Similarity of problems and goals; policy performance		Differences in setting
Greenhalgh <i>et al.</i> (2004)		Complexity	Compatibility
Radaelli (2004)			Contextualized learning
Pawson <i>et al.</i> (2005)	Outcomes	Mechanisms	Context
Wang <i>et al.</i> (2006): 7 questions on applicability and 3 questions on transferability		Applicability (process)	Transferability
Damschroder <i>et al.</i> (2009): 5 major domains; 37 constructs		Intervention; process	Setting
Buffet <i>et al.</i> (2011)		Applicability (feasibility)	Transferability (generalizability)
Williams and Dzhekova (2014): four constructs; ten factors/criteria; and fifteen 'questions to ask'.	Objective of the intervention	Applicability (feasibility) and enforceability in local context	Transferability and adequacy ('generalizability')
Ellen Nolte and Groenewegen (2021)		Innovation; features of the service or policy innovation	Context; characteristics of the originating and receiving systems; and the process of translation and transfer.

features of the innovation, and recognition of the sociocultural context of transferring and receiving services and systems. They set out (their Box 4) concepts and literature of 'policy movement' including policy diffusion, policy learning, policy transfer, policy mobility and policy circulation (cf. Baker and Walker, 2019). They then set out a conceptual framework (their Figure 2) which highlighted key elements that focused on: features of the service or policy innovation; characteristics of the originating and receiving systems; and the process of translation and transfer.

### 2.5 Realist approaches

Realist approaches stress that in order to assess how successful or not a policy is, one needs to ask not only is it working (what are the outcomes), but also 'what works for whom, in what circumstances, in what respects and how' (Pawson *et al.*, 2005). Policy programs should be examined as the product of how core mechanisms interact with context or Context (C) + Mechanism (M) = Outcome (O). In one sense, this approach is a critique of the RCT that washes away context and assume universal best practice.

## 2.6 Summary

It can be seen that terminology varies between the studies, and that there are a large number of overlapping constructs, criteria, domains, factors, hypotheses and questions. Table 1 aims to explore these factors by an ‘Occam’s Razor’ approach that draws on Dolowitz and Marsh’s (2000) three major factors for policy transfer failure: ‘Uninformed transfer’; ‘Incomplete transfer’; and ‘Inappropriate transfer’. These can be inverted and mapped onto the Context-Mechanism-Outcome configuration of Realist Approaches (e.g. Pawson *et al.*, 2005) to suggest three simple criteria of Informed Transfer (Outcomes); Complete Transfer (Mechanisms); and Appropriate Transfer (Context). Although few studies cover all three factors, all cover at least one (Table 1).

The first category of ‘informed transfer’ occurs when the borrowing country has sufficient information about how the policy operates in the donor country. It has been adapted to focus on outcomes (Pawson *et al.*, 2005) or policy success (Marsh and McConnell, 2010). It considers factors such as how was success measured, to what extent ‘observed’ success compared with ‘expected’ success (cf. Economist Intelligence Unit, 2020; Greener, 2021; Kapitsinis, 2021); and the reasons why it was chosen as a lesson (cf. Mossberger and Wolman, 2003).

The most obvious success measure is probably the mortality rate or excess mortality rate, with other success measures including mortality, infection and hospitalization rates (e.g. Greener, 2021; Kapitsinis, 2021). Wider short-term criteria might include damage to the education of children, poorer mental health and increased poverty due to economic disruptions. However, there may be longer term, more ‘indirect’ measures such as increased cancer death rates, linked with reduced levels of screening and treatments during COVID, and premature deaths linked to increased poverty. As one of the main influences on COVID mortality is age, it seems reasonable to take the age structure of a nation into account, as younger nations will tend to experience lower mortality than older nations. However, there are other influencing factors such as pre-existing levels of health population density; multi- household occupation; level of home working; and international ‘connectivity’ (e.g. Economist Intelligence Unit, 2020; Greener, 2021; Kapitsinis, 2021). It is unclear whether and how adjustments could be made for these factors.

Finally, it is unclear whether positive or negative lesson nations should be chosen on the basis of one criterion (e.g. highest mortality) or on a ‘balanced scorecard’ of measures. For example, should our best lesson be the lowest mortality rate in the world or a nation that looks ‘good’ but not necessarily the ‘best’ on a basket of criteria. Similarly, should negative lessons emerge from a global or comparator perspective? For example, when viewed from the UK, Sweden may look like a success, but less so when compared with its Nordic neighbors. Moreover, perspectives can change over time. Some nations suggested as success stories in the early period appeared far less successful later. For example, Sagan *et al.* (2021) pointed to a ‘reversal of fortune’ in the four Visegrad countries (Czechia, Hungary, Poland and Slovakia) that experienced very low cases and deaths during the 2020 spring wave, but paid a ‘high price’ for lack of preparation for the second wave with much higher levels of infections and deaths.

The second category of ‘Complete transfer’ happens when key features of what made the policy successful in the original setting are transferred. This is discussed in terms of mechanisms (Pawson *et al.*, 2005), focusing on issues such as the granularity of mechanisms, whether their key features are identified, if cause and effect relationships can be identified, and how they are related to other mechanisms. Can a clear and specific policy instrument be identified rather than a vague, generic and quasi-tautological policy instrument such as ‘good leadership’? Can policy instruments be disconnected from the wider policy mix (e.g. Capano *et al.*, 2020; Goyal and Howlett, 2021)? For example, can we extract the most important policy from a nation such as Korea, or do we have to transfer every Korean policy? A simplistic examination might conclude that a nation should *not* lockdown, as Korea did not institute a national lockdown. Viewed from the perspective of a hierarchy of evidence approach, it seems that some elements of the ‘lessons’ industry appears in fairly short perspective, viewpoint or commentary pieces in

which lists of lessons or ‘success factors’ are produced with little apparent evidence to support them. Finally, lessons have to be feasible: it is difficult to ‘test, test, test’ if nations do not have the testing capacity.

The third category of ‘Appropriate transfer’ occurs when there is a good fit between the social, economic, political and ideological contexts of the transferring and borrowing settings. This relates to context (Pawson *et al.*, 2005), fungibility (Rose, 1991), best practices (Radaelli, 2004) or goodness of fit (de Jong *et al.*, 2002). Even if success factors can be identified, it is less clear if they can be successfully transferred to different contexts. For example, attitudes to mask wearing and lockdown seem to vary significantly between different cultures. It has been suggested that response measures may be more successful in ‘tight’ rather than ‘loose’ societies (e.g. Gelfand *et al.*, 2021). Similarly, some writers have suggested that some East Asian nations may have been linked to experiencing recent pandemics such as SARS or MERS, and having built up a response infrastructure (e.g. Lee *et al.*, 2020; You 2020; Kapitsinis, 2021). In short, there may be major differences in ‘Lessons from’ and ‘Lessons for’, and policies that may work ‘there’ may not work ‘here’ (cf. Pawson *et al.*, 2005).

### 3. Lessons

A Web of Science search in October 2021 found 37 results for ‘Lessons AND COVID AND policy’ (Title) and 29 results for ‘Learning AND COVID AND policy’ (Title). Despite their titles, not all provided lessons. After eliminating duplicates, 10 articles remained that seemed to provide policy learning or lessons (Table 2).

The studies stress the importance of learning lessons, but present very different approaches. Some studies focus on single nations such as China (Liu and Saltman, 2020), New Zealand (Mazey and Richardson, 2020), South Korea (Lee *et al.*, 2020; You 2020) and part of one nation, Bhilwara India, (Golechha, 2020). Other studies compare two nations of Sweden and Italy (Farina and Lavazza, 2020), and China and Iran with a WHO Document (Raoofi *et al.*, 2020), 4 nations of Greece, Iceland, New Zealand and Singapore (Fouda *et al.*, 2020), 5 East Asian nations (An and Tang, 2020) and 10 nations (Raoofi *et al.*, 2021).

### 4. Informed transfer (Outcomes)

‘Informed transfer’ has been adapted slightly to focus on the measures of policy success, goals or outcomes, and therefore the rationale for choosing that case. Most of the studies choose nations on the basis of policy success, but Sweden and Italy seem to be less successful nations (Farina and Lavazza, 2020), while Raoofi *et al.* (2021) chose a mix of successful and less successful nations. The criteria for success seem to be largely focus on infection rates and mortality rates, with little on wider issues such as the ‘collateral damage’ of economic and social disruption such as unemployment, poverty, lost schooling, and ‘indirect’ health implications such as mental health and delays to screening and treatment. Few studies discuss in any detail ‘risk factors’ such as demographic profiles, pre-existing health status and population density.

An and Tang (2020) examined cumulative cases, tests and deaths per million population for five advanced East Asian polities. They noted that although they have fared better than their western counterparts and the rest of the world in terms of early actions and overall performance, there were still differences among them. In terms of cases, Taiwan (18), Japan (124), Hong Kong (139) and Korea (212) all clearly show substantially lower numbers than the world average of about 500, and western countries and Singapore, which recorded more than 2000 total cases per million each. They divided the number of tests by total confirmed cases, which indicates a polity’s testing capacity while accounting for the scope of the virus spread. By this measure, Hong Kong (161), Taiwan (152) and Korea (61) all show outstanding testing capacity. By contrast, Japan (14) and Singapore (8) are at much lower levels, similar to western economies. Finally, deaths per million indicated that Taiwan (0.3) shows the lowest fatality rate, followed by Hong Kong (0.5), Singapore

**Table 2.** Summary of studies by framework criteria

Study	Details	Informed transfer? (Outcomes)	Complete transfer? (Mechanisms)	Appropriate transfer? (Context)
An and Tang (2020)	Differences between and within 5 East Asian nations (Taiwan, Hong Kong, South Korea, Singapore and Japan)	Total cumulative cases, tests and deaths	Stringent and aggressive responses; prior experience and institutional infrastructure building	Culture: policy instruments that work in East Asia may not work well in other countries
Farina and Lavazza (2020)	Comparison of Sweden and Italy	Mortality rate	Low stringency in Sweden and high stringency Italy	Under similar (cultural, geographical, infrastructural) conditions the death toll could have been much lower
Fouda <i>et al.</i> (2020)	Overview of the situation, health policies and economic impact in Greece, Iceland, New Zealand and Singapore	Mortality rate	Early, proactive and strict interventions	Important lessons can be learned
Golechha (2020)	Bhilwara, Rajasthan, India	Flattening the curve (infection rates)	Largely based on WHO's pillars of the public health response Series of steps on lockdown; governance; contact tracing; screening; quarantine, isolation and treatment facilities; and risk communication and community engagement	Relevant for other low- and middle-income countries facing scarcity of resources. Seems to offer examples of successful containment to public health policymakers across the globe
Lee <i>et al.</i> (2020)	Examines the 'quadruple-loop learning model' in South Korea	South Korea is currently regarded as one of the most successful cases in the fight against COVID-19; Effective in taming COVID-19 without forced interruptions (i.e. lockdowns) of citizens' daily lives	Agile responses, transparent risk communication and voluntary citizen participation in NPIs like social distancing Examines critical factors to effective learning organizations such as leadership, information and transparency, as well as citizen participation and governance	Context important

(Continued)

Table 2. (Continued.)

Study	Details	Informed transfer? (Outcomes)	Complete transfer? (Mechanisms)	Appropriate transfer? (Context)
Liu and Saltman (2020)	China	Unclear, but negative?	Three phases of disease control	Scrutiny may be helpful for other nations
Mazey and Richardson (2020)	New Zealand	Success	Success owes more to effective fire-fighting and strong crisis leadership than to anticipatory policy making Lessons involving expertise; making tough decisions; political skills to 'sell' them; and 'luck'	Advocated 'best practice' of anticipatory policy making
Raoofi <i>et al.</i> (2020)	Compared Iran with China, and with WHO recommendations		Examined pre-epidemic and post-epidemic measures; Examined WHO six building blocks	
Raoofi <i>et al.</i> (2021)	Ten nations: Iran; five relatively successful and four less successful countries	Nations selected on basis of worldwide prevalence and mortality of COVID-19; and on the views of four senior experts in the field	Detailed description of policies in nations. But suggests 'simple measures' including mask wearing, social distancing and washing hands frequently	Aim to draw evidence-informed policy lessons
You (2020)	South Korea: discusses transfer lessons from Korea to other contexts	Success	(a) Speedy and swift action, (b) '3 T' measures (widespread Testing, contact Tracing, and rigorous Treating), and (c) public-private cooperation and civic Awareness; Three principles: openness, transparency, and democracy; 'TRUST' Strategy	South Korea as a model to emulate; Essential to understand the context within which South Korea's policy actions emerged; A mostly homogeneous cultural and institutional structure helped facilitate an effective response

(3), Korea (5) and Japan (5), compared to the world average of 36, with the range in western countries being 90 in Germany to 566 in Spain.

Farina and Lavazza (2020) noted that Sweden as of July 2020 saw 564 deaths per million inhabitants compared Italy (581) but nearly five times greater than that of the other Nordic countries combined, which seems to suggest that under similar (cultural, geographical, infrastructural) conditions the death toll could have been much lower; hence, that many lives could have been saved if a different approach had been pursued. In short, neither Italy nor Sweden appeared to offer be linked with policy success, but Sweden was slightly more successful than Italy.

Fouda *et al.* (2020) provided an overview of the COVID-19 situation, health policies and economic impact in Greece, Iceland, New Zealand and Singapore, which were chosen due to their ability to contain the spread and mitigate the effects of COVID-19 on their societies. They set out data in detailed tables and figures. Unusually, they draw on the Imperial College study data for death rate per age cohort to estimate the expected mortality rates per age cohort in each of the four nations.

Golechha (2020) focused on the Bhilwara district of Rajasthan, a western Indian state that has shown a way to public health policymakers globally for containing COVID-19 with an effective screening and containment strategy combined with a stringent lockdown. They stated that its policy response made it the only district in the country with initial such high number of cases to a rapid decline in cases in a short span of 20 days. The 'Bhilwara model' has been so successful in containing the COVID-19 and become an example for other Indian states and policymakers.

According to Lee *et al.* (2020), Korea's crisis management policy is considered one of the most successful cases of proactively mitigating COVID-19 without substantive disruptions in daily economic, political and social activities of citizens, and that the WHO reported the Korean case as one of the incredible success in handling COVID-19, with the UN terming it a 'success story'.

Liu and Saltman (2020) focused on China's 'early' efforts. They are not clear on whether China provided a positive lesson, but suggest that the responses speeded after the centralized response of the Chinese government from about 20 January 2020. However, they seem to tend towards a negative lesson as they discuss the major reasons why the governmental information chain broke before January 2020, and key structural health system limitations as the epidemic expanded.

Mazey and Richardson examined the 'remarkable success' of New Zealand, stating that it has been crowned World Champion COVID-19 Crusher. They do not provide much detail on criteria, but data (e.g. Worldometers) shows that NZ has low (but not the lowest) infection and death rates.

Raoofi *et al.* (2020) aimed to compare the policies and strategies that Iran is adopting, with the experience and recommendations of China and WHO to combat COVID-19. They examined activities in Iran compared to the WHO (2010) six health systems 'building blocks' of governance; service delivery; financing; health workforce; information and research and medical products and technologies (their Table 3).

>Raoofi *et al.* (2021) selected ten nations: five relatively successful countries in dealing with coronavirus (China, Japan, South Korea, Germany and Singapore), four less successful countries (the United States, the United Kingdom, Spain and Italy) in addition to Iran, on the basis of prevalence and mortality of COVID-19, and on the views of 'four senior experts in the field'. They provided detailed data in the form of Figures, Tables and a Supplementary file on the main policy contents of the selected countries (e.g. cases, deaths, tests, hospital beds, workforce) based on WHO (2010) six building blocks.

You (2020) argued that South Korea has emerged as a model to emulate in fighting the pandemic. The rationale for this claim is not fully clear, but focuses largely on mortality.

## 5. Complete transfer (Mechanisms)

Complete transfer examined the key features of what made the policy successful in the original setting, and whether it is possible to detect cause and effect relationships between policy

instruments and success. Policy instruments tended to be discussed in fairly broad and vague terms, which sometimes border on the quasi-tautological such as ‘good leadership’.

According to An and Tang (2020), many commentators attributed their four Asian polities’ successes to aggressive and comprehensive policy instruments themselves or a culture that supports public cooperation and voluntary compliance. However, less attention has been given to the ‘pre-established institutional infrastructure’ They do not directly examine cause and effect relationships, but rather the rank order of stringency: Hong Kong adopted the most stringent responses (55.95), followed by Korea (31.35), Taiwan (30.56), Singapore (26.59) and Japan (13.89) does not simply map onto the ranks of cases (Taiwan (18), Japan (124), Hong Kong (139) and Korea (212); Singapore; tests by total confirmed cases (Hong Kong (161), Taiwan (152) and Korea (61); Japan; Singapore) or deaths. They concluded that the five advanced East Asian polities have fared better than their western counterparts and the rest of the world in terms of early actions and overall performance, but there were still differences among them.

They examined responses in the form of: creating a Capable Emergency Institution and Expanding Public Health Infrastructure; Overhauling Regulatory Frameworks; Reorganizing Emergency Manuals; Promoting Public Health Behavioral Practices. They noted that the four East Asian polities established an early warning system and put in place institutional infrastructure after SARS in 2003 and MERS in 2015 (Korea), including specifically, all created their Centers for Disease Control and Prevention (CDC)-equivalent emergency institutions. However, they fail to point out that less successful nations such as the USA had a ‘CDC’, while the UK had Public Health England. Finally, they argued that the SARS epidemics in Hong Kong, Singapore and Taiwan and the MERS outbreak in Korea exposed the vulnerability of their respective health care systems, resulting in all four polities taking steps to upgrade their health care facilities such as more negative pressure rooms, ICUs and infectious disease laboratories that can handle massive viral testing.

Farina and Lavazza (2020) compared Italy’s ‘tough’ response with Sweden’s softer approach. They also examined the Oxford stringency index, with at mid-March 2020 Italy scoring 90.48, the most stringent level alongside with Spain. However, Sweden scored 28.57 and it was among the countries with the least stringent measures in the world. As of mid of July, Italy scored 58.33 and Sweden 38.89. The harsh measures implemented by the Italian government (2 weeks after the first cases were discovered in the country’s North) arguably came in too late and did not manage to prevent the surge of cases that has heavily taxed the capacity of an extremely well-regarded health care system.

Fouda *et al.* (2020) provided a timeline of the policy interventions in Greece, Iceland, New Zealand and Singapore, with detailed tables and figures. They pointed out that while New Zealand and Greece locked down earlier than most nations relative to the amount of cases, Iceland never declared a full lockdown instead the number of people able to meet was restricted. They suggested that one of the reasons for early success in containing the pandemic might be due to the geographic nature of the four countries. Three of the countries are islands: Iceland, New Zealand and Singapore, and Greece is a peninsula with a large number of islands. However, they pointed out that the curve of the total positive cases in Singapore showed an exponential pattern from day 80 onwards, which was due to the outbreaks in the country’s densely populated migrant dormitories, which makes social distancing difficult. They concluded that early, proactive and strict interventions along with leveraging previous experience on communicable diseases and the evolution of testing strategies are key lessons that can be synthesized from the interventions of the four countries and that could be useful for a potential second wave or similar pandemics.

Golechha (2020) considered that the ‘ruthless containment’ of the ‘Bhilwara model’ flattened the curve in a short span of 3 weeks with effective screening and containment strategy combined with a stringent lockdown. They suggested that aggressive early contact tracing and extensive surveillance, rational testing, effective lockdown, efficient risk communication and community engagement, adequate quartile and isolation along with decentralization of authority seem to

offer examples of successful containment to public health policymakers across the globe. The Bhilwara containment strategy was largely based on WHO's (2020) pillars of the public health response for COVID-19.

The steps of the Bhilwara containment policy included: a stringent and effective lockdown; governance and multi-sectoral coordination; cluster mapping and contact tracing; robust surveillance and screening; ramping up of quarantine, isolation and treatment facilities; and risk communication and community engagement with the humanistic approach. Some of these seem rather vague, but some precision was given for mass surveillance and rigorous screening measures, which involved 332 teams of health workers, police personnel and volunteers for the screening of the urban population, and around 1900 teams for the rural population. With the population of Bhilwara at some 2.7 m, this suggested one team for approximately every 1200 people.

Lee *et al.* (2020) examined the 'quadruple-loop learning', where the nature of the new problem (target), context and past experiences jointly affect a particular organization in the course of searching for solutions to an emerging problem, in Korea. They noted that past policy experiences are closely associated with institutional memories and policy learning after the SARS crisis of 2003 and the MERS crisis of 2015. However, the Korea Center for Disease Control and Prevention (KCDC) was founded after the SARS crisis of 2003, but did not prevent the MERS crisis. They set out the 'critical factors to initial success in taming COVID-19 in South Korea' of: actors and leaders; information and transparency; and decision-making processes and governance.

In an early published article, Liu and Saltman (2020) argued that the response in China can be roughly divided into three phases. The first phase took place between 1 December 2019 and 19 January 2020, where the main responsibility for disease control rested with the Wuhan municipal government and Hubei Province. The second phase, 'imposing a centralized approach', the central government took 'strong measures' between 20 January and 27 January. The third phase, from January 28 onwards, included the national government requiring each Province to contain the disease through a series of restrictive measures, including mandatory quarantine of individuals and preventing movement between areas.

Mazey and Richardson (2020) argued that although New Zealand was not well-prepared for a pandemic, being ranked only thirty-fifth out of 195 countries in the 2019 Global Health Security Index, with a poor overall score of only 54/100, Prime Minister Jacinda Ardern appears to have delivered US President, Donald Trump, a master class in crisis management, making New Zealand a 'COVID-19 podium country'. They explained that New Zealand achieved this remarkable success having been apparently not well prepared by a number of factors. First and foremost, Ardern recognized that a global pandemic meant that specialist expertise was critical to effective policy making. Second, she came to this crisis with a lot of political capital. Third, her COVID-19 press conferences contained few references to 'me' and lots to 'us', framing the government's response as our response to the crisis, not hers. Fourth, New Zealand is both a unitary state and broadly speaking, a relatively united country. Fifth ('and most importantly'), New Zealand was extremely lucky in that it was able to benefit from cross-national learning. When driving in fog, keeping a close eye on the car in front is helpful. As the pandemic rolled around the world, New Zealand policy makers and the New Zealand public could see just how horrific things could get. The early Italian experience of COVID-19 loomed large both in media coverage and in the minds of policy makers. The Italian case was a sharp reminder that some drastic domestic action was needed. Seeing the Fiat go off the road was, in effect, a very effective 'spark' leading to rapid policy. They argued that virtually everyone in New Zealand accepted that a severe lockdown was both necessary and inevitable. The decision to go 'hard and fast' led to a severe, six-week lockdown (possibly the most severe in any democracy), combined with a huge spending package to support employees and businesses, generated 87 per cent public support. However, their 'main lesson' seemed to emerge from beyond their evidence: while this success was associated with effective fire-fighting and strong crisis leadership, all governments, including COVID-19 podium countries like New Zealand, need to change from a reactive to a much more anticipatory approach to public

policy making, where governments conduct detailed advanced planning, and seek detailed input from key interests likely to be impacted, prior to a possible major event.

Raoofi *et al.* (2020) stated that Iran's policy content can be divided into two categories: pre-epidemic and post-epidemic measures, and examined the latter stage with respect to the WHO six building blocks and China's Measures and Policies in Response to COVID-19 Epidemic. They provided a detailed description of policies in nations, with many Tables. However, their conclusion appears rather vague: Iran's success in controlling this crisis depends on the extent of applying the whole-government and whole-society approach in formulation, implementation and evaluation of involved policies.

Raoofi *et al.* (2021) concluded that their findings suggested that three main strategies (widespread testing, comprehensive contact tracing and timely measures) were the most effective directions to combat COVID-19.

You (2020) examined Korea's responses in three policy strategies: (a) Speedy and swift action, (b) '3 T' measures (widespread Testing, contact Tracing and rigorous Treating), and (c) public-private cooperation and civic awareness. South Korean officials also call it the 'TRUST' strategy, which stands for Transparency, Robust screening and quarantine, Unique but universally applicable testing, Strict control and Treatment. He argued that his analysis highlighted certain factors in the Korean context that were pivotal to the country's policy response: well-prepared national infectious disease plans, collaboration with the private sector, stringent contact tracing, an adaptive health care system and government-driven communication. He suggested that although the primary goal of Korea's infectious disease emergency management plan was prevention and preparedness, it prioritized three principles: openness, transparency and democracy.

## 6. Appropriate transfer (Context)

Appropriate transfer occurs when there is a good fit between the social, economic, political and ideological contexts of the transferring and borrowing settings. Put another way, it focuses on 'fungibility' (Rose, 1991), or the degree to which the transplant is likely to be rejected (de Jong *et al.*, 2002).

Some of the studies seem to assume that 'best practices' are fungible and can be transplanted Fouda *et al.*, 2020; Liu and Salzman, 2020; Mazey and Richardson, 2020; Raoofi *et al.*, 2021). On the other hand, other studies stress the importance of contextual features such as culture, and point to the difficulties of lessons developed in other contexts (An and Tang, 2020; Farina and Lavazza, 2020; You, 2020). Golechha (2020) stress transfer to other low- and middle-income countries facing scarcity of resources. Lee *et al.* (2020) stress the importance of the learning process rather than being learned 'by rote' from another context.

An and Tang (2020) note that policy instruments must be designed with the underlying cultural and societal conditions in mind. Any policy instrument requires public cooperation and voluntary compliance to be effective, so policy instruments that infringe on individual freedom are more feasible and sustainable in East Asian culture that emphasizes collectivism. Hence, policy instruments that work in East Asia may not work well in other countries.

Farina and Lavazza (2020) discussed contextual factors such as population density, the proportion of single-person households; the layout of towns; and the level of social and institutional trust. They pointed out that Italy and Sweden had similar death rates, but that Sweden's death toll was nearly five times greater than that of the other Nordic countries combined, which seems to suggest that under similar (cultural, geographical, infrastructural) conditions the death toll could have been much lower; hence, that many lives could have been saved if a different approach had been pursued. They continued that applying the Swedish approach to Italy, and to many other countries like Italy worldwide, would likely 'result in a massacre'.

Fouda *et al.* (2020) argued that important lessons can be learned from the management of the COVID-19 pandemic in the four countries, and that key lessons that can be synthesized from the interventions of the four countries could be useful for a potential second wave or similar

pandemics. They concluded that, regardless of the differences in the demographic, epidemiological, health system profile, *some* (my emphasis) of these lessons can be applied even in countries with larger borders, bigger populations or less stable economy.

Golechha (2020) claimed that the 'Bhilwara model' has become an example for other Indian states and policymakers. They noted that many countries with well-resourced health systems, like South Korea, Japan, New Zealand have successfully contained the COVID-19, but their strategy may not be feasible for resource-limited settings. For example, countries such as South Korea isolated infected people based on widespread testing, but Bhilwara's mass-surveillance approach has achieved a similar goal, and be relevant for other low- and middle-income countries facing scarcity of resources. The Bhilwara model has 'shown the way to global policymakers' and is relevant to limited resource settings like low- and middle-income countries.

According to Liu and Saltman (2020), scrutiny of China's central government's response and the limitations of the current Chinese health care system may be helpful to other countries as they in turn fight the epidemic's ongoing spread (p. 1145).

Lee *et al.* (2020) stressed that the context of the Korean government was also a very important factor that affected the frontstage organizational learning. First, most of Korea's GDP relies on international trade and export. Second, Korea is a free democratic country where a lockdown policy was the last option the Korean government could choose. Third, the Korean government was well prepared to respond the COVID-19 crisis thanks to experience and knowledge gained from the past failure. They noted that it is important to examine how different institutional, cultural, technological and environmental factors can improve the quadruple-loop learning mechanism in different governments, which will require more in-depth case studies as well as cross-country and cross-case comparative studies.

Mazey and Richardson (2020) claimed that four lessons stand out from the New Zealand case. First, situations like the pandemic demand that politicians rely on experts and refrain from second-guessing people who know a lot more than they do. Second, politicians need the courage to make very tough (and often unpopular) decisions in order to manage a crisis situation. Third, politicians need political skills to 'sell' tough decisions. Fourth, New Zealand got lucky by being able to watch the car in front in the COVID-19 fog, but relying on a luck in crises is not a good idea. However, their main lesson (above) was that all governments need to be much more anticipatory rather than reactive in their approach to public policy making.

Raoofi *et al.* (2020) concluded that Iran's success in controlling this crisis depends on the extent of applying the whole-government and whole-society approach in formulation, implementation and evaluation of involved policies. Raoofi *et al.* (2021) argued that policy learning is pivotal to mitigate the risks and facilitate returning to life, although semi or emerging normal life.

You (2020) argued that government leaders and public administrators can learn from other countries and adapt these lessons to their crisis management and public health systems. In particular, he concluded that other countries could use Korea's experience to inform their pandemic responses. First, a mostly homogeneous cultural and institutional structure helped facilitate an effective response. This means that different institutional structures and cultures could facilitate or limit the transferability of these policy approaches of Korea. Second, proper actions from the legislative and executive branches were administered prior to the pandemic. As Korea had experienced MERS outbreaks, the government expanded legal and administrative boundaries in regard to pandemic responses before COVID-19. Third, the public health budget and flexible fiscal management systems allowed the Korean government to provide adequate resources. In short, Korea's institutional structures and cultures, legislation and government budget made it possible to implement responses necessary in a pandemic situation.

## 7. Discussion

Lessons from the articles have been discussed in terms of three simple criteria of Informed Transfer (Outcomes); Complete Transfer (Mechanisms); and Appropriate Transfer (Context). It

is difficult to extract clear lessons because of the difficulties associated with each criterion. First, measures of policy success are often not clear. Should measures be ‘direct’ COVID health measures such as infections, hospitalizations, deaths or excess deaths? To what extent should actual outcomes be compared with expected outcomes, taking into account features such as age, obesity, deprivation, population density and so on? Put another way, some scholars have examined control variables (e.g. Kapitsinis (2021) or contextual variables (e.g. Greener, 2021). Should single measures or a ‘balanced scorecard’ be stressed? To what extent can success take account of future issues such as the negative health effects of lockdowns and delayed treatments in the health care system?

Second, it is unclear whether individual mechanisms or tools can be transferred, or whether it is the combination or package of mechanisms (policy mix) (Capano *et al.*, 2020) or pathways (Greener, 2021) that counts. The mechanisms that feature in the lessons are often rather vague such as ‘aggressive’ contact tracing or quasi-tautological such as ‘good leadership’. Capano *et al.* (2020) pointed out that, as is common with many policy problems, government COVID-19 responses involved a ‘mix’ or bundle of tools in a variety of policies. Using topic modeling, they found 13 topics or themes in the CoronaNet dataset and 18 topics in the OECD database. They stressed that the response from one country to another varied not only in the composition of the policy mix but also in the timing of policy adoption as well as in the ‘intensity’ or ‘stringency’ with which various tools were deployed. Using QCA, Greener (2021) reported that the sufficient solution for low COVID-19 mortality as an outcome has three pathways, which have high testing per COVID-19 case in common. He concludes that the ‘TESTCASE’ factor has a strong claim to be the most important causal factor for first-wave response to COVID-19, being both conceptually and empirically important.

More granular policy mixes contrast with broad solutions of either ‘elimination strategies’ (e.g. Hassan *et al.*, 2021) or the ‘East Asian approach’ (see e.g. Wong and Wu, 2021). Hassan *et al.* (2021) contrast a combination of mitigation and suppression strategies in Europe and the United States with an elimination strategy in New Zealand, Taiwan, Vietnam, South Korea, Australia and China. However, rather than a crude binary approach, responses are more likely to form a continuum of policy mixes, with significant intra-group variance. Similarly, within East Asia, Wong and Wu (2021) claimed that similar COVID-19 outcomes have been achieved by two completely different approaches. Rather than representing a standardized, one-size-fits-all approach, Hong Kong and Singapore adopted contrasting but contextually appropriate models, with the former taking a more ‘Society-Centred Bottom-Up Approach’ and the latter adopting a more ‘State-Centred Top-Down Approach government-centred approach’. For example, unlike Singapore, Hong Kong did not institute a state-led large-scale lockdown. They concluded that the experiences of these two city-states support the usefulness of multiple configuration causality in comparative policy analysis, which allows unpacking and diagnosing some complex observations often encountered in comparative policy analysis by pinpointing that a policy outcome can be caused by multiple factors, which may have different effects, including opposite ones, on it (multifinality) and the same outcome can be caused by different combinations of those factors (equifinality). In short, in comparative policy analysis, it is important to avoid the trap of oversimplification and over-generalization to assume the existence of a single solution or the most superior model. In short, clear lessons would point to single mechanisms or policy mixes that can be ‘exported’, but as Lancaster *et al.* (2020) point out ‘entangled evidence and interventions’ make it difficult to isolate interventions from their not only situated contexts as well as from each other.

Third, ‘transferability’ or ‘fungibility’ of practices is problematic. For example, Douglas *et al.* (2021) warn against ‘best practices’ as successes are not easily reproduced, and copying and pasting ‘cookie-cutter recipes’ or attempts to simply mimic and transplant ‘success stories’ across time, space and context should be avoided. Many studies seem to implicitly assume universal best practices or high transferability, but much of the conceptual literature (Table 1) warns that transfer is a complex rather than a simple process.

## 8. Conclusions

This study has put forward one major conceptual and one major empirical contribution. The conceptual contribution has used ‘Occam’s Razor’ principles in order to simplify the proliferation of approaches involving an expanding and confusing mix of hypotheses, questions, criteria, domains, constructs, factors and criteria (Table 1) into three broad criteria. It has fused the three reasons for transfer failure (Dolowitz and Marsh, 1996, 2000) and the Context-Mechanism- Outcome configuration of Realist Approaches (e.g. Pawson *et al.*, 2005) to suggest three simple criteria of Informed Transfer (Outcomes); Complete Transfer (Mechanisms); and Appropriate Transfer (Context).

The empirical contribution suggests that it is difficult to learn lessons from the existing literature. While some governments may not have been interested in lessons from abroad, there was also a ‘supply’ problem in that clear lessons were in as short supply as PPE. Drawing on the suggested conceptual framework, lessons about successful transfer involves a clear idea of policy success, understanding how the policy instrument or mechanism links with success in the original context, and how ‘fungible’ it is to the new context. Conversely, transfer failure may result if it is unclear how it links with success in the original context, difficult to distill from its operating environment of other instruments or difficult to transplant. Put another way, the ‘COVID lessons industry’ may itself need to learn that lessons about policy transfer should be Informed, Complete and Appropriate.

## References

- An B and Tang S-Y (2020) Lessons from COVID-19 responses in east Asia: institutional infrastructure and enduring policy instruments. *American Review of Public Administration* 50, 790–800.
- Baker T and Walker C (2019) Introduction: The centrality of arenas, agents and actions. In Baker T and Walker C (eds), *Public Policy Circulation*. Cheltenham: Edward Elgar Publishing, pp. 2–25.
- Buffet C, Ciliska D and Thomas H (2011) *It Worked There. Will it Work Here? Tool for Assessing Applicability and Transferability of Evidence*. Hamilton, ON: National Collaborating Centre for Methods and Tool.
- Capano G, Howlett M, Jarvis D, Ramesh M and Goyal N (2020) Mobilizing policy (in) capacity to fight COVID-19: understanding variations in state responses. *Policy and Society* 39, 285–308.
- Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA and Lowery JC (2009) Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation Science* 4, 50.
- de Jong W, Jong M, Lalenis K and Mamadouh V (2002) *The Theory and Practice of Institutional Transplantation: Experiences with the Transfer of Policy Institutions*. New York: Springer.
- Dolowitz D and Marsh D (1996) Who learns what from whom: a review of the policy transfer literature. *Political Studies* 44, 343–357.
- Dolowitz D and Marsh D (2000) Learning from abroad: the role of policy transfer in contemporary policy-making. *Governance* 13, 5–24.
- Douglas S, Schillemans T, Hart P, Ansell C, Andersen LB, Flinders M, Head B, Moynihan D, Nabatchi T, O’Flynn J, Peters BG, Raadschelder J, Sancino A, Sorensen E and Torfing J (2021) Rising to Ostrom’s challenge: an invitation to walk on the bright side of public governance and public service. *Policy Design and Practice* (Early View).
- Economist Intelligence Unit (2020) *How Well Have OECD Countries Responded to the Coronavirus Crisis?* London: EIU.
- Farina M and Lavazza A (2020) Lessons from Italy’s and Sweden’s policies in fighting COVID-19: the contribution of biomedical and social competences. *Frontiers in Public Health* 8, 563397.
- Fouda A, Mahmoudi N, Moy N and Paolucci F (2020) The COVID-19 pandemic in Greece, Iceland, New Zealand, and Singapore: health policies and lessons learned. *Health Policy and Technology* 9, 510–524.
- Gelfand MJ, Jackson JC, Pan X, Nau D, Pieper D, Denison E, Dagher M, Van Lange PAM, Chiu C-Y and Wang M (2021) The relationship between cultural tightness–looseness and COVID-19 cases and deaths: a global analysis. *Lancet Planet Health* 5, e135–e144.
- Golechha M (2020) India’s Bhilwara COVID-19 containment policy response: lessons for public health policy makers globally. *JoGH* 10, 1–5.
- Goyal N and Howlett M (2021) “Measuring the mix” of policy responses to COVID-19: comparative policy analysis using topic modelling. *Journal of Comparative Policy Analysis: Research and Practice* 23, 250–261.
- Greener I (2021) Comparing country risk and response to COVID-19 in the first 6 months across 25 Organisation for economic co-operation and development countries using qualitative comparative analysis. *Journal of International and Comparative Social Policy* 37, 211–225.

- Greenhalgh T, Robert G, Macfarlane F, Bate P and Kyriakidou O** (2004) Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Quarterly* **82**, 581–629.
- Hassan I, Mukaigawara M, King L, Fernandes G and Sridhar D** (2021) Hindsight is 2020? Lessons in global health governance one year into the pandemic. *Nature Medicine* **27**, 396–400.
- Kapitsinis N** (2021) The underlying factors of excess mortality in 2020: a cross-country analysis of prepandemic healthcare conditions and strategies to cope with COVID-19. *BMC Health Services Research* **21**, 1197.
- Lancaster K, Rhodes T and Rosengarten M** (2020) Making evidence and policy in public health emergencies: lessons from COVID-19 for adaptive evidence-making and intervention. *Evidence & Policy* **16**, 477–490.
- Lee S, Hwang C and Moon M** (2020) Policy learning and crisis policy-making: quadruple-loop learning and COVID-19 responses in South Korea. *Policy and Society* **39**, 363–381.
- Liu Y and Saltman R** (2020) Policy lessons from early reactions to the COVID-19 virus in China. *American Journal of Public Health* **110**, 1145–1148.
- Liu Yu and Saltman Richard B** (2020) Policy Lessons From Early Reactions to the COVID-19 Virus in China. *American Journal of Public Health* **110**(8), 1145–1148.
- Marsh D and McConnell A** (2010) Towards a framework for establishing policy success. *Public Administration* **88**, 564–583.
- Mazey S and Richardson J** (2020) Lesson-drawing from New Zealand and COVID-19: the need for anticipatory policy making. *The Political Quarterly* **91**, 561–570.
- Mossberger K and Wolman H** (2003) Policy transfer as a form of prospective policy evaluation: challenges and recommendations. *Public Administration Review* **63**, 428–440.
- Nolte E and Groenewegen P** (2021) How can we transfer service and policy innovations between health systems? Policy Brief 40. WHO Regional Office for Europe: Copenhagen.
- Pawson R, Greenhalgh T, Harvey G and Walshe K** (2005) Realist review- a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research and Policy* **10** (Supplement 1), S1–21–34.
- Powell M and King-Hill S** (2020) Intra-crisis learning and prospective policy transfer in the COVID-19 pandemic. *International Journal of Sociology and Social Policy* **40**(9/10), 877–892.
- Radaelli C** (2004) The diffusion of regulatory impact analysis – best practice or lesson-drawing? *European Journal of Political Research* **43**, 723–747.
- Raofi A, Takian A, Akbari S, Olyaeemanesh A, Haghighi H and Aarabi M** (2020) COVID-19 pandemic and comparative health policy learning in Iran. *Archives of Iranian Medicine* **23**, 220–234.
- Raofi A, Takian A, Haghighi H, Rajizadeh A, Rezaei Z, Radmerikhi S, Olyaeemanesh A and Sari AA** (2021) COVID-19 and comparative health policy learning; the experience of 10 countries. *Archives of Iranian Medicine* **24**, 260–272.
- Rose R** (1991) What is lesson-drawing? *Journal of Public Policy* **11**, 3–30.
- Rose R** (1993) *Lesson-drawing in Public Policy: A Guide to Learning Across Time and Space*. Chatham, (NJ): Chatham House Publishing.
- Sagan A, Bryndová L, Kowalska-Bobko I, Smatana M, Spranger A, Szerencsés V, Webb V and Gaál P** (2021) A reversal of fortune: comparison of health system responses to COVID-19 in the Visegrad group during the early phases of the pandemic. *Health Policy, Early View*.
- Vagionaki T and Trein P** (2020) Learning in political analysis. *Political Studies Review* **18**, 304–319.
- Wang S, Moss J and Hiller J** (2006) Applicability and transferability of interventions in evidence-based public health. *Health Promotion International* **21**, 76–83.
- Williams C and Dzhekova R** (2014) Evaluating the cross-national transferability of policies: a conceptual framework. *Journal of Developmental Entrepreneurship* **19**, 1–18.
- Wong W and Wu A** (2021) State or civil society – what matters in fighting COVID-19? A comparative analysis of Hong Kong and Singapore. *Journal of Comparative Policy Analysis: Research and Practice* (Early View).
- World Health Organization** (2010) *Monitoring the Building Blocks of Health Systems: A Handbook of Indicators and Their Measurement Strategies*. Geneva: WHO.
- World Health Organization** (2020) 2019 Novel Coronavirus (2019-nCoV): Strategic preparedness and response plan. Geneva: WHO.
- Yoo J** (2020) Lessons from South Korea's COVID-19 policy response. *American Review of Public Administration* **50**, 801–808.