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# Lessons learned from the resilience of public health systems, hospitals and their personnel to the COVID-19 pandemic: a scoping review protocol. V.1

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Lola Traverson[1], Isadora Mathevet[1], Amanda Paes[2], Karla Paz[2], Andrea Andrade[2], Katarina Ost[3], Kate Zinszer[3], Valery Ridde[1]

[1]CEPED / IRD / Université de Paris; [2]Fiocruz-PE; [3]Université de Montréal

Lola Traverson
CEPED, Institute for Research on Sustainable Development, IR...





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**We are still developing and optimizing this protocol**

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## Troubleshooting

## Title and author identification

1 **Lessons learned from the resilience of public health systems, hospitals and their personnel to the COVID-19 pandemic: a scoping review of empirical literature.**

Lola Traverson[1], Isadora Mathevet[1], Amanda Correia[2], Karla Paz[2], Andrea Andrade[2], Katarina Ost[3], Kate Zinszer[3], Valéry Ridde[1]

1- CEPED/IRD/Université de Paris

2- Fiocruz-PE

3- Université de Montréal

## Rationale

2 Beyond essential biomedical research, it is imperative that the COVID-19 pandemic be studied in terms of its impact on public health, health care systems and professionals. There is an urgent need to understand how public health institutions, hospitals and their staff have faced the current crisis. Understanding the resilience of health care and public health systems is central to this study and to the HoSPiCOVID research project[1] within which this study is being conducted. This notion of resilience refers to the capacity to adapt and transform in order to maintain functioning and (public health and health systems) services for all in the context of such a crisis[2,3].

## Review objective

3 The purpose of this scoping review is to study and compare the resilience of public health systems, hospitals and their staff to the COVID-19 pandemic, and to draw lessons from international experiences with a view to improve responses to this crisis and future ones.

## Search strategy

4 **Search strategy**

4.1 **Data selection**

1- We will base our researches on a collection of articles related to the COVID-19 pandemic published on the Stephen B. Thacker CDC Library of the Center for Disease Control (CDC) of the the United States website[4]. These articles were collected on the following databases : Medline (Ovid and PubMed), PubMed Central, Embase, CAB

Abstracts, Global Health, PsycInfo, Cochrane Library, Scopus, Academic Search Complete, Africa Wide Information, CINAHL, ProQuest Central, SciFinder, the Virtual Health Library, LitCovid, WHO COVID-19 website, CDC COVID-19 website, China CDC Weekly, Eurosurveillance, Homeland Security Digital Library, ClinicalTrials.gov, bioRxiv (preprints), medRxiv (preprints), chemRxiv (preprints), and SSRN (preprints). The search strategy used to select the data is updated daily (on working days) and available on the same website.

2- We will download, every day (until the end of may 2020), the CDC collection and will import it on Zotero to sort the data with a request in English (Table 1). Requests in other languages (French and Spanish) have not proven to be relevant or effective. The request in English will be designed in consultation with two librarians from the University of Montreal.

| | Concept | Hospitals and professionnals | Resilience |
|---|---|---|---|
| | Keywords | healthcare ; health care ; health system ; hospital ; health facilit ; health center ; medical center ; health service ; worker ; staff ; clinician ; personnel ; human resource ; professional ; volunteer ; physician ; nurse ; paramedic ; doctor_ ; doctors ; workforce ; trainee | resilienc ; shock ; crisis ; crise ; challenge ; emergenc ; disturbance ; capacit ; respons ; strength ; adapt ; strateg ; prepar ; readiness ; sustain ; effectiv ; stress ; impact ; effect ; surge ; extraordinary ; organization ; organisation ; optimi ; restructur ; communicat ; collaborat ; coordinat ; partner ; essential function ; basic function ; logistic ; service ; structural measure ; access ; resource ; equipment ; supply ; supplies ; medication ; drug ; policy ; policies ; governance ; leader ; manag ; financ ; funds ; funding ; training ; recruit ; innovat ; regulation ; triage ; evaluat ; support ; hopeless ; helpless ; efficien ; opportunit ; solution ; frontline ; engagement ; coping ; priorit |

Table 1: English request on Zotero

3 - The selected data will then be classified by the ATCER tool[5,6] according to their degree of empiricism. In view of the large number of data, we decided to only retain data

with an empirical degree greater than or equal to 90.

4.2 **Inclusion and exclusion criteria**

Articles were included in the review if they:
- have been published between December 2019 and May 2020;
- have been published in English or in French;
- focus on the resilience of public health systems, hospitals and professionals to the COVID-19 pandemic;
- are empirical according to the ATCER tool (degree of empiricism ≥ 90);
- use quantitative, qualitative data or mixed methods.

Articles were excluded of the review if they:
- are not empirical (grey literature, i.e. press articles, letters, editorials...) or have an empirical degree lower than 90;
- do not focus on resilience of public health systems, hospitals or professionals to the COVID-19 pandemic.

Exclusion criteria will be further defined once the screening will be done.

4.3 **Main outcomes**

- Study of the degree of resilience of public health and health care systems to the COVID-19 pandemic.
- Comparison of the processes/measures/actions that have been and are still implemented in different countries and at different levels (public health systems, hospitals, professionals) to face the crisis.
- Understanding of the effects of these processes on people's use of care.
- Understanding and study of the determinants of resilience.

## Data extraction (selection and coding)

5 The selected articles will be then imported into Covidence[7] for the title, abstract and full text screening of the articles. Covidence will automatically remove all the duplicates. Two reviewers will independently proceed to the title and abstract screening. Irrelevant articles will be excluded. Four reviewers will then independently proceed to the full text screening. They will also extract data from the included articles, assess the quality of studies and undertake the evidence synthesis.

Data extracted will include:
- the study characteristics: title, author (s), year of publication, country of publication;
- the study design;
- the main results of the study according to our conceptual framework about health system resilience.

## Risk of bias (quality) assessment

6 The quality of the studies will be assessed using the Mixed Methods Appraisal Tool (MMAT) developed by Hong et al[8].

## Strategy for data synthesis (optional)

7 The criteria for the data synthesis will be based on the number of studies that have reported the outcomes of interests, i.e. resilience of public health systems, hospitals and professionals to the COVID-19 pandemic. According to the number of studies retained, the team will decide to write one or several scoping reviews. The outcomes will be reported in a descriptive manner and will also be subject to thematic analysis. As part of the HoSPiCOVID research project, workshops in each of the five countries and a final international workshop in the summer/fall of 2021 will bring together policy and decision makers, hospital and public health professionals, researchers and civil society organizations to collectively produce operational recommendations based on the lessons learned between countries. This knowledge transfer strategy, based on the project's evidence and the expertise of the participants, will enable the sharing of lessons at an operational level.

## References

8 1 - HoSPiCOVID website. Available from : **https://u-paris.fr/hospicovid/**.

2 - Turenne CP, Gautier L, Degroote S, Guillard E, Chabrol F, Ridde V. Conceptual analysis of health systems resilience: A scoping review. Social Science & Medicine [Internet]. 2019 Jul [cited 2019 May 15];232:168–80. Available from: https://linkinghub.elsevier.com/retrieve/pii/S0277953619302205.

3 - Ridde V, Benmarhnia T, Bonnet E, Bottger C, Cloos P, Dagenais C, et al. Climate change, migration and health systems resilience: Need for interdisciplinary research. F1000Research [Internet]. 2019 Jan 7 [cited 2019 Jan 8];8:22. Available from: https://f1000research.com/articles/8-22/v1.

4 - Stephen B. Thacker CDC Library website. Available from : https://www.cdc.gov/library/researchguides/2019novelcoronavirus/researcharticles.html.

5 - Automated Text Classification of Empirical Records (ATCER) User Guide. Available from : https://babel.iro.umontreal.ca/xres/ATCER_instructions_final.pdf.

6 - Langlois A, Nie J-Y, Thomas J, Hong QN, Pluye P. Discriminating between empirical studies and nonempirical works using automated text classification. Res Syn Meth.

2018;1–15. https://doi.org/10.1002/jrsm.1317

7 - Covidence website. Available from : **https://www.covidence.org/**.

8 - Hong QN, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, et al. The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. Education for Information. 2018;34:285-91. Available from : http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/127916259/MMAT_2018_criteria-manual_2018-08-01_ENG.pdf.

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