

## Citation

Rachael England, Elizabeth Kumar, Vida Zohoori, Lawrence Nyanzi, Susan Bissett. How do pandemics affect oral health? A systematic review. PROSPERO 2021 CRD42021248289 Available from: [https://www.crd.york.ac.uk/prospERO/display\\_record.php?ID=CRD42021248289](https://www.crd.york.ac.uk/prospERO/display_record.php?ID=CRD42021248289)

## Review question

To understand how pandemics affect oral health and oral health-related behaviours of communities and individuals and how access to oral healthcare changed during and after a pandemic.

## Searches

Elsevier, Wiley, Springer, MEDLINE, CINAL, Embase, Sage, Nature, Scopus, Cochrane, ScienceDirect, Psy Info and Proquest. Grey literature will be searched for through NICE Evidence Search, OpenGrey, The Grey Literature Report, Bielefeld Academic Search Engine (BASE), and additional searches will be carried out using Google Scholar and Google.

English Language

From 01/01/2011 to present

## Search strategy

[https://www.crd.york.ac.uk/PROSPEROFILES/248289\\_STRATEGY\\_20210411.pdf](https://www.crd.york.ac.uk/PROSPEROFILES/248289_STRATEGY_20210411.pdf)

## Types of study to be included

Quantitative; primary, surveys, randomized control trials, cohort, case control studies

Qualitative; interviews, focus groups, ethnography, case studies

Mixed methods studies

Systematic reviews

Meta-analysis

## Condition or domain being studied

Oral diseases including dental caries and periodontal disease. Oral health-related behaviours

## Participants/population

Inclusion: Adults, children globally

Exclusion: None

## Intervention(s), exposure(s)

Inclusion: Exposure to pandemics or epidemics, Coronavirus or corona-virus, Influenza, HIV, MERS, SARS

## Comparator(s)/control

Oral health of the global population during non-pandemic times

## Main outcome(s)

The primary aim of this study is to understand how pandemics affect oral health and oral health-related behaviours for example. changes in toothbrushing frequency, changes in rates of dental attendance of communities and individuals and assessing the barriers and facilitators to dental attendance during a pandemic.

## Additional outcome(s)

Not applicable

## Data extraction (selection and coding)

Inclusion criteria:

Pandemics and oral health and oral health-related behaviours

For example, toothbrushing and dietary habits

Access to care during pandemics

Access to care for people with infectious disease

Clinician attitude to treating patients with infectious disease

Two team members will independently screen the titles and abstracts for inclusion. The studies will be assigned to one of three categories; inclusion, exclusion or further review needed. Any discrepancies will be discussed and resolved by consensus, and if required, a third team member will be consulted for mediation. Data extraction will be conducted and recorded on Covidence. One researcher will extract the study details, according to the inclusion and exclusion criteria, which will be made available for the second team member to review the data extraction for each study.

Data will be extracted according to the Centre for Reviews and Dissemination (CRD) checklists for systematic review, randomised control trial, cohort study and case control study. A further checklist for qualitative studies will be used.

Data to be extracted (example systematic review):

Authors, Year, Journal.

Did the review address a clearly focused question?

Did the authors look for the right type of papers?

Is it worth continuing? Yes/No

Do you think all the important, relevant studies were included?

Did the review's authors do enough to assess quality of the included studies?

If the results of the review have been combined, was it reasonable to do so?

What are the overall results of the review?

How precise are the results?

Can the results be applied to the local population?

Were all important outcomes considered?

Are the benefits worth the harms and costs?

## Risk of bias (quality) assessment

Two researchers will independently assess the included papers' methodological quality according to the appropriate Critical Appraisal Skills Programme checklist ('CASP CHECKLISTS - CASP - Critical Appraisal Skills Programme', 2008) for the method of the study under review. Any discrepancies will be discussed to reach an agreement; furthermore, all results will be discussed by the research team.

### Strategy for data synthesis

A theory of change has been developed to understand how the response to pandemics and pandemics themselves impact on oral health and related behaviours; this will highlight the chain of causal assumptions behind why changes occurred. A narrative synthesis is an approach used in systematic reviews; although considered less robust than statistical analysis, or meta-analysis which only focuses on descriptive causation. As this study seeks to understand behavioural changes and the influence of external pressures, telling the story of people and communities by examining contextual variables and outcomes, a narrative synthesis is appropriate for this systematic review.

A preliminary thematic analysis will be conducted to identify common themes and patterns affecting individuals and the community's oral health during pandemics. These themes will be assessed to understand how they relate to each other and the oral health challenges experienced during lockdowns.

Relationships between the studies will be examined to explore variability in outcomes, study design, population and settings. Heterogeneity is an essential element of the synthesis and will review how the studies are affected by their methodological difference or population variables. Differences between studies and their reported findings will be highlighted to compare and contrast the relationship between the studies exhibiting homogeneity. Social heterogeneity will also be incorporated to consider the sociodemographic, historical, cultural, and other differences that will affect how pandemics impact different communities.

### Analysis of subgroups or subsets

Not applicable

### Contact details for further information

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### Organisational affiliation of the review

Teesside University

### Review team members and their organisational affiliations

Ms Rachael England. Teesside University  
Ms Elizabeth Kumar. Teesside University  
Professor Vida Zohoori. Teesside University  
Dr Lawrence Nyanzi. Teesside University  
Dr Susan Bissett. Newcastle University

### Type and method of review

Narrative synthesis, Systematic review

### Anticipated or actual start date

12 April 2021

### Anticipated completion date

30 September 2021

### Funding sources/sponsors

None

### Conflicts of interest

### Language

English

### Country

England

### Stage of review

Review Ongoing

**Subject index terms status**

Subject indexing assigned by CRD

**Subject index terms**

Humans; Influenza, Human; Oral Health; Pandemics

**Date of registration in PROSPERO**

19 April 2021

**Date of first submission**

11 April 2021

**Stage of review at time of this submission**

The review has not started

<b>Stage</b>	<b>Started</b>	<b>Completed</b>
Preliminary searches	No	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

*The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.*

*The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.*

**Versions**

19 April 2021