



## Article

# An update on developments in medical education in response to the COVID-19 pandemic: A BEME scoping review: BEME Guide No. 64

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Available at <http://clock.uclan.ac.uk/36617/>

*Daniel, Michelle, Gordon, Morris ORCID: 0000-0002-1216-5158, Patricio, Madalena, Hider, Ahmad, Pawlik, Cameron, Bhagdev, Rhea, Ahmad, Shoaib, Alston, Sebastian, Park, Sophie et al (2021) An update on developments in medical education in response to the COVID-19 pandemic: A BEME scoping review: BEME Guide No. 64. Medical Teacher, 43 (3). pp. 253-271. ISSN 0142-159X*

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## *Appendix 1: Search strategy*

### **PubMed**

(covid-19[tw] OR COVID19[tw] OR COVID-19[nm] OR SARS-CoV-2[tw] OR SARS-CoV2[tw] OR severe acute respiratory syndrome coronavirus 2[nm] OR severe acute respiratory syndrome coronavirus 2[tw] OR 2019-nCoV[tw] OR 2019nCoV[tw] OR coronavirus[tw] OR coronavirus[mh] OR pandemic[tw]) AND ("Internship and Residency"[Mesh] OR "Students, Medical"[Mesh] OR "Education, Medical"[Mesh] OR "Schools, Medical"[Mesh] OR Intern[tiab] OR interns[tiab] OR "House officer"[tw] OR "house officers"[tw] OR Resident[ti] OR residents[ti] OR residency[ti] OR "medical education"[tw] OR fellow[tiab] OR fellows[tiab] OR "junior doctor"[tw] OR "junior doctors"[tw] OR "post-graduate"[tw] OR postgraduate[tw] OR "foundation year"[tw] OR "foundation program"[tw] OR "medical student"[tw] OR "medical students"[tw] OR "Curriculum"[mesh] OR curricul\*[tiab] OR "medical school"[tw] OR "medical schools"[tw] OR "medical training"[tw] OR "undergraduate"[tw] OR "graduate"[tw] OR Learn\*[tw] OR training[tw] OR trainer[tw] OR trainee\*[tw] OR instructor\*[tw] OR instructional[tw] OR educat\*[tw] OR classroom\*[tw] OR simulat\*[tw] OR virtual[tw] OR ZOOM[tw]) AND ("2020/05/01"[Date - Publication] : "3000"[Date - Publication])

### **Embase**

('covid 19':ti,ab OR covid19:ti,ab OR 'covid 19':tn OR 'sars cov 2':ti,ab OR 'sars cov2':ti,ab OR 'severe acute respiratory syndrome coronavirus 2':tn OR 'severe acute respiratory syndrome coronavirus 2':ti,ab OR '2019 ncov':ti,ab OR 2019ncov:ti,ab OR coronavirus:ti,ab OR 'coronavirinae'/exp OR pandemic:ti,ab) AND ('medical education'/exp OR 'health student'/exp OR 'medical school'/exp OR intern:ti,ab OR interns:ti,ab OR 'house officer':ti,ab OR 'house officers':ti,ab OR resident:ti OR residents:ti OR residency:ti OR 'medical education':ti,ab OR fellow:ti,ab OR fellows:ti,ab OR 'junior doctor':ti,ab OR 'junior doctors':ti,ab OR 'post graduate':ti,ab OR postgraduate:ti,ab OR 'foundation year':ti,ab OR 'foundation program':ti,ab OR 'medical student':ti,ab OR 'medical students':ti,ab OR 'curriculum'/exp OR 'curriculum development'/exp OR curricul\*:ti,ab OR 'medical school':ti,ab OR 'medical schools':ti,ab OR 'medical training':ti,ab OR undergraduate:ti,ab OR graduate:ti,ab OR learn\*:ti,ab OR training:ti,ab OR trainer:ti,ab OR trainee\*:ti,ab OR instructor\*:ti,ab OR instructional:ti,ab OR educat\*:ti,ab OR classroom\*:ti,ab OR virtual:ti,ab OR zoom:ti,ab) AND [2020-2021]/py

### **CINAHL**

( (MH "Coronavirus+") OR (MH "Coronavirus Infections+") ) OR TI ( covid-19 OR COVID19 OR MW COVID-19 OR SARS-CoV-2 OR SARS-CoV2 OR MW "severe acute respiratory syndrome coronavirus 2" OR "severe acute respiratory syndrome coronavirus 2" OR 2019-nCoV OR 2019nCoV OR coronavirus OR pandemic ) OR AB ( covid-19 OR COVID19 OR MW COVID-19 OR SARS-CoV-2 OR SARS-CoV2 OR MW "severe acute respiratory syndrome coronavirus 2" OR "severe acute respiratory syndrome coronavirus 2" OR 2019-nCoV OR 2019nCoV OR coronavirus OR pandemic )

*AND*

TI ( Intern OR interns OR "House officer" OR "house officers" OR OR "medical education" OR fellow OR fellows OR "junior doctor" OR "junior doctors" OR post-graduate OR postgraduate OR "foundation year" OR "foundation program" OR "medical student" OR "medical students" OR curricul\* OR "medical school" OR "medical schools" OR "medical training" OR undergraduate OR graduate OR Learn\* OR training OR trainer OR trainee\* OR instructor\* OR instructional OR educat\* OR classroom\* OR simulat\* OR virtual OR ZOOM ) OR AB ( Intern OR interns OR "House officer" OR "house officers" OR OR "medical education" OR fellow OR fellows OR "junior doctor" OR "junior doctors" OR post-graduate OR postgraduate OR "foundation year" OR "foundation program" OR "medical student" OR "medical students" OR curricul\* OR "medical school" OR "medical schools" OR "medical training" OR undergraduate OR graduate OR Learn\* OR training OR trainer OR trainee\* OR instructor\* OR instructional OR educat\* OR classroom\* OR simulat\* OR virtual OR ZOOM ) OR TI ( Resident OR residents OR residency ) OR ( (MH "Education, Health Sciences+") OR (MH "Schools, Medical+") OR (MH "Students, Health Occupations+") OR (MH "Curriculum+")) )

### **PsycInfo**

((DE "Coronavirus" OR DE "Middle East Respiratory Syndrome" OR DE "Severe Acute Respiratory Syndrome")) OR TI ( covid-19 OR COVID19 OR MW COVID-19 OR SARS-CoV-2 OR SARS-CoV2 OR MW "severe acute respiratory syndrome coronavirus 2" OR "severe acute respiratory syndrome coronavirus 2" OR 2019-nCoV OR 2019nCoV OR coronavirus OR pandemic ) OR AB ( covid-19 OR COVID19 OR MW COVID-19 OR SARS-CoV-2 OR SARS-CoV2 OR MW "severe acute respiratory syndrome coronavirus 2" OR "severe acute respiratory syndrome coronavirus 2" OR 2019-nCoV OR 2019nCoV OR coronavirus OR pandemic )

### **AND**

TI ( Intern OR interns OR "House officer" OR "house officers" OR OR "medical education" OR fellow OR fellows OR "junior doctor" OR "junior doctors" OR post-graduate OR postgraduate OR "foundation year" OR "foundation program" OR "medical student" OR "medical students" OR curricul\* OR "medical school" OR "medical schools" OR "medical training" OR undergraduate OR graduate OR Learn\* OR training OR trainer OR trainee\* OR instructor\* OR instructional OR educat\* OR classroom\* OR simulat\* OR virtual OR ZOOM ) OR AB ( Intern OR interns OR "House officer" OR "house officers" OR OR "medical education" OR fellow OR fellows OR "junior doctor" OR "junior doctors" OR post-graduate OR postgraduate OR "foundation year" OR "foundation program" OR "medical student" OR "medical students" OR curricul\* OR "medical school" OR "medical schools" OR "medical training" OR undergraduate OR graduate OR Learn\* OR training OR trainer OR trainee\* OR instructor\* OR instructional OR educat\* OR classroom\* OR simulat\* OR virtual OR ZOOM ) OR TI ( Resident OR residents OR residency ) OR ( (DE "Medical Education" OR DE "Medical Internship" OR DE "Medical Residency" OR DE "Psychiatric Training") OR (DE "Medical Students") OR (DE "Curriculum" OR DE "Curriculum Development")) )

## ***Appendix 2: Full text screening form***

*Does this paper describe developments or interventions in medical education explicitly deployed in response to COVID-19?*

- Yes (include)
- No (exclude)

*Do the participants include medical students, residents, fellows or physicians? (The study may include other health professions in addition.)*

- Yes (include)
- No (exclude)

*The paper is an opinion piece, commentary, editorial, perspective, call for change, needs assessment, or other study where no actual development was deployed (e.g., an evaluation of the impact of COVID on training where an intervention is not described; an evaluation of "e-learning" across multiple institutions where the e-learning developments are not described).*

- Yes (exclude)
- No (include)

*This study describes a development that is a minor part of a larger package of planned measures (e.g., an entire university, including the medical school, pivoted to online education).*

- Yes (exclude)
- No (include)

*This study describes outcomes, either Kirkpatrick's outcomes (level 1 reaction, satisfaction; level 2a change in attitudes, level 2b change in knowledge or skills; level 3 change in behavior; level 4a change in organizational practice, level 4b change in clinical outcomes) OR other outcomes (e.g., quality improvement effect, policy change, etc).*

- Yes (include)
- No (exclude)

*Population – this study pertains to:*

- UME
- GME
- CME

*Focus - this study pertains to:*

- Assessment
- Telehealth
- Well-being / mental health / learner support
- Faculty Development
- Clinical service reconfiguration or early graduation to support the response to COVID-19
- Interviews (admission to medical school, selection to residency, faculty selection)
- Training for treating patients with COVID-19 (e.g., simulations)
- Pivot to online learning (synchronous, asynchronous)
- Service provision
- Other