



Article

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

Daniel, Michelle, Gordon, Morris, Patricio, Madalena, Hider, Ahmad, Pawlik, Cameron, Bhagdev, Rhea, Ahmad, Shoaib, Alston, Sebastian, Park, Sophie, Pawlikowska, Teresa, Rees, Eliot, Doyle, Andrea Jane, Pammi, Mohan, Thammasitboon, Satid, Haas, Mary, Peterson, William, Lew, Madelyn, Khamees, Deena, Spadafore, Maxwell, Clarke, Nicola and Stojan, Jennifer

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

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Table 2: Origin of included studies

Origin	Level of medical education				Total
	UME	GME	CME	Mixed	
United States	26	22	8	3	59 (46.5%)
Canada	0	0	4	1	5 (3.9%)
South America	0	3	1	0	4 (3.1%)
Europe	8	7	4	1	20 (15.7%)
Middle East	6	2	1	2	11 (8.7%)
Africa	0	0	0	1	1 (0.8%)
Asia	9	5	3	3	20 (15.8%)
Oceania	2	0	0	0	2 (1.6%)
International	0	2	1	2	5 (3.9%)
Totals:	51 (40.2%)	41 (32.3%)	22 (17.3%)	13 (10.2%)	127 (100%)

UME = undergraduate medical education, GME = graduate medical education, CME = continuing medical education, Mixed = some combination of UME, GME, CME

Table 3: Institutional Setting

Who is responsible for educational delivery?	Level of medical education				
	UME	GME	CME	Mixed	Total
University	31	2	1	1	35 (27.5%)
Academic Hospital	19	32	15	9	75 (59.1%)
Collaboration	1	3	4	2	10 (7.9%)
Other (e.g. national organization)	0	4	2	1	7 (5.5%)
Totals:	51 (40.2%)	41 (32.3%)	22 (17.3%)	13 (10.2%)	127 (100%)

UME = undergraduate medical education, GME = graduate medical education, CME = continuing medical education, Mixed = some combination of UME, GME, CME

Table 4: Discipline or medical specialty

Specialty	UME	GME	CME	Mixed	Total
Anatomy	3	0	0	0	3
Anesthesiology	0	1	3	1	5
Emergency Medicine	1	3	2	2	8
Family Medicine	0	1	1	0	2
Internal Medicine	3	2	0	0	5
Medicine subspecialties	0	2	0	0	2
Neurology & Neuropsychology	1	0	0	1	2
Obstetrics and Gynecology	2	0	0	0	2
Pathology	3	3	0	0	6
Pediatrics	3	3	3	1	10
Radiology & Subspecialties	3	6	0	0	9
Surgery (General)	3	6	0	1	10
Surgical Subspecialties	5	8	1	3	17
Multi-professional or multi-disciplinary	3	5	10	4	22
Not described or not applicable	21	1	2	0	24
Total					127

Table 5: Focus of development

Focus	UME	GME	CME	Mixed	Total
Pivot to online learning (synchronous, asynchronous)	31	20	2	5	58 (45.7%)
Simulation (training for treating patients with COVID-19)	0	4	14	6	24 (18.9%)
Assessment	8	3	0	0	11 (8.7%)
Other or multiple areas of focus	2	5	1	1	9 (7.1%)
Well-being / mental health / learner support	3	1	3	1	8 (6.3%)
Telehealth	4	1	0	0	5 (3.9%)
Clinical service reconfiguration or early graduation to support the response to COVID-19	2	2	0	0	4 (3.1%)
Interviews (admission to medical school, selection to residency)	0	4	0	0	4 (3.1%)
Service provision	1	1	0	0	2 (1.6%)
Faculty or professional development	0	0	2	0	2 (1.6%)
Total	51	41	22	13	127 (100%)

Table 6: Kirkpatrick's or other outcomes

	Number of Studies
Kirkpatrick Level 1: Reaction or Satisfaction	98
Kirkpatrick Level 2a: Change in Attitudes	26
Kirkpatrick Level 2b: Change in Knowledge or Skills	47
Kirkpatrick Level 3: Change in Behavior	2
Kirkpatrick Level 4a: Change in Organizational Practice	6
Kirkpatrick Level 4b: Change in Clinical Outcomes	1
Kirkpatrick Not described	8
Other Outcomes (e.g., quality improvement, policy change, etc.)	30

Note: several studies addressed multiple Kirkpatrick levels or had multiple outcomes