Research Article

Medical Education During COVID 19 Pandemic: A Trainees Experiences

Hind ELZEIN MRCP[1], Tarig MOHAMED MRCGP[1], Ezeldin A A Ibrahim MRCP, FRCP[2], Abdalazeem IBRAHEM MRCP[1]

[1]Cardiothoracic Department, Freeman Hospital, Newcastle-Upon-Tyne, UK.

[2]Internal Medicine Department, Sharg Al Neel Hospital, Khartoum, Sudan.

***Corresponding author:** Abdalazeem Ibrahem, Cardiothoracic Department, Freeman Hospital, Newcastle-Upon-Tyne, UK

Received: 28 April 2022; **Accepted:** 06 May 2022; **Published:** 11 July 2022

Citation: Abdalazeem Ibrahem, Tarig Mohamed, Hind Elzein. Medical Education During COVID 19 Pandemic: A Trainees Experiences. Archives of Clinical and Biomedical Research 6 (2022): 600-605.

Keywords: Medical education; COVID 19; virtual education; social media event; online medical education

Background

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has led to a significant disruption in global medical education, with a substantial shift from traditional education methods to virtual teaching. As a result, the entire medical society worldwide has had to adopt a steep learning curve to respond to widespread interruption to medical education and significantly reduce routine clinical work. In addition, it required an unprecedented amount of sharing of medical knowledge and collaborations around the world [1]. During the Covid -19 era, the online method has largely replaced conventional teaching styles. The disruption ranges in structure, delivery, and future of medical education. One of the challenges is that clinical training is more brutal to deliver online. The adoption to availability of advanced technology incorporated into everyday medical education has made medical education more

achievable; however, the adaption of this technology requires full understanding to enable efficient and effective teaching methods; both educators and learners require paramount time to adapt this technique [2]. To meet climate change in medical education, we implemented an online teaching platform by a group of specialty trainees and consultants from different specialties who worked as one team. The team's main objective was to develop a robust teaching program, meet the challenges, and acknowledge the rapid change in delivering medical education during such a global crisis. Therefore, a teaching platform and networking have been established to help improve and address medical training, education, and patient care regionally and internationally during the COVID-19 crisis.

A total of five online webinar series (each spanning two days) and subsequent two webinars (table 1) under the theme of acute cardiovascular care have been conducted. The immense teaching activity commenced between March 2020 and January 2021, with national and international audiences. An extensive range of topics has been covered, and more than 50 virtual sessions have been delivered, with various specialties. The teaching program has attracted encouraging feedback from the learners. The team went a step further to create a website and YouTube channel called Neogen Medical Education to sustain the education project. The YouTube channel now serves as the hosting platform for virtual webinars and conferences [7]. An extensive range of topics has been covered. Within various specialties (table1), case-based discussions are delivered by consultants and trainees from different specialties. The audience has been asked to respond to the post-event-feedback survey. The feedback analysis has reflected that the educational program is well-received by audiences and has met expectations. A specific page created on Neogen Medical Education website (Resource page) contains all PowerPoint slides to support learning and access to education and training on the COVID-19 outbreak. Resources include links to past COVID-19 Series webinars and recommended guidance for consultant doctors and specialty trainees.

Table 1: Medical Education during COVID 19 Crisis, Acute Cardiovascular Care and Internal Medicine

Acute cardiovascular care and internal medicine in COVID-19 era (ACIM Webinar Events /series)		
Webinar	**Topic**	**Specialty**
Webinar 1	Acute Coronary Syndrome	Cardiology
Saturday 18th – Sunday 19th April 2020	Cardiac Arrhythmias.	Cardiology
	Covid-91 related VTE.	Haematology
	Clinical personation of COVID-19	Internal medicine – Virology
	Ventilation Therapy.	Respiratory /ICU medicine
	Acute heart failure in COVID patients.	Cardiology
	Myocarditis and pericarditis in COVID -19 patients	Cardiology
	Acute Coronary Syndrome	Cardiology
Webinar 2	STEMI Management in COVID patient:	Cardiology
Sunday 2nd – Sunday 3rd April 2020	PCI Vs Thrombolysis therapy	Cardiology
	Cardiac Arrest in COVID Patients.	Cardiology

	Late presentation STEMI in OVID patients.	Cardiology
	Critical Care Management of COVID-19	ICU medicine
	Heart failure management in relation to COVID-19	Cardiology
	Diagnostic imaging in COVID-19.	Radiology
	Update on the diagnosis of Pulmonary embolism.	Respiratory
	Management of Neutropenic sepsis in COVID -19 patients.	Internal/ acute medicine
	STEMI Management in COVID patient	Cardiology
Webinar 3	Renal presentation of COVID	Nephrology
Monday 25th - Tuesday 26th May 2020	Advance heart failure Management in COVID-19 era	Cardiology
	Acute atrial fibrillation in COVID -19 era	Cardiology
	Neurology presentation of COVID-19	Neurology
	Immunology related COVID-19	Immunology
	Convalescent plasma therapy in COVID-19	Haematology
	Renal presentation of COVID	Nephrology
	Advance heart failure Management in COVID-19 era	Cardiology
	Acute atrial fibrillation in COVID -19 era	Cardiology
	Neurology presentation of COVID-19	Neurology
	Immunology related COVID-19	Immunology
Webinar 4	Respiratory presentation of COVID-19	Respiratory
Thursday 11th June & Saturday 13th June 2020	Critical care management of COVID-19	ICU medicine
	Summary of the clinical trials and drug therapy during corvid era.	Research/clinical trials
	Emergency assessment and management of COVID-19	Acute medicine
	Resuscitation of COVID patients	ALS and ICU medicine
	PONIT of care ultrasound (Pocus) in COVID-19.	Respiratory
	Interesting case presentation: Atrial fibrillation	Cardiology
	Interesting case presentation: Acute heart failure management.	Cardiology
	Respiratory presentation of COVID-19	Respiratory

	Critical care management of COVID-19	ICU medicine
Webinar 5	Haematology presentation (Thrombotic and anticoagulant therapy)	Haematology
Saturday 11th - Sunday 12th July 2020	Chronic Steroids Use in COVID Era	Respiratory
	Advance management of atrial fibrillation in COVID era.	Cardiology
	Case presentation (PE& pulmonary hypertension).	Respiratory
	Endocrinology & Diabetes presentation (DKA& HONK)	Endocrinology/Diabetes
Acute cardiovascular Care Webinar Series 1		
Webinar	**Topic**	**Speciality**
Webinar 6	Chronic coronary Syndrome guideline (ESC 2019).	Cardiology
Saturday 19th September 2020	How to implement Chronic Coronary Syndrome guideline (case presentation)	Cardiology
	Update on Aortic Stenosis management.	Cardiology
	A challenging Case presentation (Pericardial effusion).	Cardiology
Webinar 7	**Updates on antithrombotic Therapy in ACS**	Cardiology
Friday 22nd January 2021	How to implement guidelines case presentation base discussion	Cardiology
	ESC 2020 guidelines – Diagnosis, assessment, risk stratification	Cardiology
	ESC 2020 guidelines - Invasive vs non-invasive therapy	Cardiology
	Acute Arrhythmias	Cardiology

Discussion

Using social media platforms to deliver medical education during a pandemic to overcome barriers in online training to reach healthcare providers, specifically those who had limited access to more conventional communication platforms, was valuable and beneficial while practicing social distance. The revolution in telemedicine during the COVID-19 epidemic may represent a transformation in medicine with the advancement of virtual teaching. The

long-term impact of the covid 19 pandemics on medical learners' educational gaps is unknown, and a retrospective study might be required [3].

The Success of an online teaching experience depends on diligent organization, leadership, and excellent communication skills. In addition, meticulous design and the adoption of interactive methods play a significant role in boosting the educational impact, which would be reflected in the excellent feedback from learners [4]. During the pandemic, virtual teaching and webinars have been increasingly serving as a platform to initiate medical education change around the globe. It is evident that "principled decision-making, change leadership, and crisis communication were essential to the educational response to the pandemic" [5].

The transition from the routine educational program to online teaching has been a tremendous and fruitful experience, and the team learned a great deal about leadership in medical education. The main goal has been to help deliver high-quality teaching programs to support our colleagues and improve healthcare outcomes. In addition, sharing experiences, including knowledge implications, strategies, and impact and limitations in such pandemic crises to be available in the higher education literature database, would further consolidate evidence in the existing literature [6].

A particularly challenging aspect of education during the pandemic was technology adoption for online training, as it was a steep learning curve while hosting the webinars. The team rapidly learned how to host live webinars and quickly adapted to using the Zoom platform. Despite the disruption of the Covid pandemic, time management, balance between professional commitments like novel patient care, residency training requirement while voluntarily dedicating time and efforts to organizing and hosting online webinars. This aspect contributes to individual experiences and the development of leadership and time management skills. Telemedicine provided the opportunity to actively engage in discussions and debates on contemporary issues, particularly in the Covid-19 era, and all leitmotifs of current health education, leadership, and management practice in public service organizations, including partnerships. These formative lessons reflect by learners as supportive and influential to the medical community during the pandemic.

Conclusion

During the Covid crisis, the entire medical community has significantly affected. However, virtual teaching platforms played an excellent practical solution in replacing the old teaching methods. Tele-education during the covid-19 crisis facilitated and encouraged medical career progression and improved academic ability, provided an excellent opportunity to develop a rapid exchange of knowledge and professional values, and a range of general non-technical skills that would help to lead across professional boundaries. Efficient and effective virtual medical education requires multiple managerial skills, particularly leadership skills as a key role of success in delivering high-quality teaching sessions. This experience demonstrated that the virtual teaching platform was a great online teaching tool. The teaching sessions program was well-received by the learner, with significant appreciation from health workers working on the frontline in the UK and internationally.

References

1. Yuen J, Xie F. Medical education during the COVID-19 pandemic: perspectives from UK trainees. Postgraduate Medical Journal 96 (2020): 432-433.
2. Hilburg R, Patel N, Ambruso S, et al. Medical Education During the Coronavirus Disease-2019 Pandemic: Learning From a Distance. Adv Chronic Kidney Dis 27 (2020): 412-417.
3. Dedeilia A, Sotiropoulos MG, Hanrahan JG, et al. Medical and Surgical Education Challenges and Innovations in the COVID-19 Era: A Systematic Review. In Vivo 3 (2020):1603-1611.
4. Chrysi Rapanta1, Luca Botturi, Peter: Goodyear, & Lourdes Guàrdia4 & Marguerite Koole, Switzerland AG. 202019,
5. Lucey CR, Johnston SC. The Transformational Effects of COVID-19 on Medical Education. JAMA 324 (2020): 1033-1034.
6. Kerryn Butler-Henderson et al. COVID-19 in Higher Education Literature Database (CHELD V1): An open-access systematic literature review database with coding rules. Journal of Applied Learning & Teaching 3 (2020).
7. Neogen Medical Education England. https://www.neogenmedicaleducation.co.uk/