

MEDICAL EDUCATION DURING PANDEMIC

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INTRODUCTION

Globally coronavirus has undeniably disorderly the significant, traditional structure of medical training. The advanced requirements of face-to-face have accelerated the transformation of an online training environment, comprising both concurrent and contemporary virtual education, along with the commencement of modern methods for the trainee assessment. Meanwhile, this extensive crisis had a significant impact on the daily routine of medical learners along with their mental status and the influence on their theoretical curriculum. The latest event has, on various facts, been responsible for the 'misconduct' of medical training as attribute medical personnel, which has been observed by most of them as perfect students and assisting proficiency and has resulted in divergent responses from the academic organizations. After all surveys of institutions, the necessity for provoking and latest modification for the recent circumstances has been conducted as a springboard for outstanding innovations in medical learning, comprising the progression of additional "evidence-based" methods. The Covid pandemic have claimed instant transformation to distant education in medical schools (Shahrkini, et al., 2020). Medical student engagement in direct patient management has been greatly limited during the Covid pandemic. Compulsory rotations not only for core programs but also for reporting findings regarding field option has been interrupted during a crucial window in the employment phase. Present practical rotations are greatly experiential or lack patient-facing elements. It generates a great effect on medical education during a pandemic. Challenges were experienced by medical staff and trainers as well as cost-effective various difficulties were faced by medical beginners and schedules alike, including the cost-effective outcome of the pandemic; medical education is affected due to social distance, history and examination of patients become more difficult in training programs and general consequences on the health and psychological balance of internee and trainer (Chao, et al., 2021). The capability of clinical groups and scholars to peer evaluation, manage medical study, and continue with creative writing were exactly replaced by the prompt advancement in peer-based and pilot version text (Singh, et al., 2021). This chapter reviews these difficulties and measures schemes that institutions, instructors, and students chosen and created to deliver excellent training during these innovative times. In this period, online meetings have offered a solution for practitioners to proceed with learning, teaching, and correspondence. With the help of online meetings attempting to approximate

individual interviews as much as possible, it creates great ideas dynamic as the host as well as participants come together conversing to a online in place of of a physical audience. COVID-19 pandemic has demanded compulsory e-learning in medical and nursing education. To provide a model for an effective program throughout the COVID-19 pandemic for medical student trainers that present and educate clinical theories important in different specialties overall (Manalo, et al., 2021). The coronavirus COVID-19 pandemic have negative effects on social life, the economy, and educational facilities all over the globe. Medical schools and institutions are addressing the challenges to contribute better education to their learners during the protracted duration of isolation. Scientifically modern states have an arrangement in position for online and virtual medical training. Here, we identify the challenges being confronted by teachers and students in online medical education throughout the COVID-19 pandemic. These comprise shortage of faculty training and lack of institutional support, poor internet connectivity problems, keeping student interest, online assessments, and problems with comprehensive dynamics of online education. An interdisciplinary approach including all interest groups, intuitional support, excess of free online training programs, and creative thinking can help overcome these trouble (Rathore, et al., 2020).

Key Challenges Experienced in Medical Education During COVID-19

- Less funding resources for organizations and training activities
- Low budget for Graduate Medical Education and Continued Medical Education
- Intensification of psychological factors associated with subtle discrimination
- Female instructors greatly influenced
- Learning tools are more likely to be affected due to the lack of interaction with direct faculty members
- More susceptibility to psychology depression
- Isolation induces loneliness
- Mood and sleep disturbance
- Avoidance of face-to-face lessons
- Avoid violence into service
- Progression of feelings of guiltiness by learners those not involved in direct medical assistance

- Deployment of insignificant care department apprentices to the intensive care unit
- Progression of insufficiencies in natural advanced training
- Redistributed trainees pushed to practice beyond the safe situation
- Dread about interposing about reassignment
- Aggravation of current proclivities, particularly against undersold subgroups
- Doubtfulness about testing outcomes, location, and adjournment of testing
- Marked hurdle in taking immigration processing
- Trouble in search renunciation works
- Incapability to arrange to trouble hospitalization due to visa restrictions
- Requirement for quick distribution of details to be managed with the authenticity of referee
- The quick communication of disinformation
- Undermine patient confidentiality
- Establishment and distribution of impervious material.

Economic Insecurity:

A considerable decrease in revenue was observed in healthcare centers and clinical training as a consequence of the extensive financial damage of the pandemic. The budget for health was decreased by 18% in the primary financial zone of 2020. Wages had to be decreased by organizations although expanded hours of work. Despite risk payment being offered by several organizations, more have to nullify premiums to fulfill economic insufficiencies. The notable fall was observed by operative and pediatrics training, with multiple services deducting earnings, discharge, and same firing off workers as a result of deletions of optional programs. Likewise, bachelor clinical training associated support for ongoing clinical training was restricted by organizations, and this causes possible effects on instructors extremely. Interns involved in the community assistance allowance waiver scheme were provided assistance when the assembly approved into rule the Covid assistance, help, and cost-effective Security. Difficulties raised due to economic insecurity arrived mandatory on behalf of organizations to extend to learners and instructors encounter economic adversity and furnish funds to receive economical guidance or assistance to reduce a bit of the tension.

Research depicting the financial consequences of the Covid all over the world on trainees and instructors there be required to design scheme for improving through hereafter and to advise organizations in producing suitable funds allowances approaching modern scientific modifications required by means of distribution of clinical training as well as granting response, experiment, and interrogating. (Webb Hooper, et al., 2020).

Role of Electronic Data Interchange

The African-American community has been unnecessarily infected with Covid, and the persistent divergences in medical services became amplified. Virtual influences of medical care providers and the lack of EDI programs in health care have, somewhat comparatively, assisted further on variations. Cognitive makers linked to undeclared partiality become magnified through the unpredictability out of this worldwide. Hence, currently the most conventional programs on community factors of healthcare and inferred partiality education require stand emphasize by clinical instructors. For the assist of these activities, data supplied by organizational EDI departments or reported compositions can be utilized. Online material on electronic data interchange has also been given on the AMAE hub. Just two decades before the pandemic, as medical institutes' registration twice, the ratio of diminished graduates down by 16%. Graduates who rely on school-based facilities are potentially influenced by Covid associated limitations. The impact of these alterations on interns of all settings be necessary reviewed by the professional and curriculum and take appropriate steps to enhance distance access for specific interns. Lady interns, half of the interns are critically affected due to lack of accessibility of preschool care or caring for the elderly due to Covid, It creat a considerable impact on professional life, incorporation, and intellectual effectiveness particularly (Nichols, et al., 2021). Learners from vulnerable environments are considerable more influenced due to the shortage of change of training departments and the deficiency of face-to-face communication with staff on hospital rotations (It creat great impact when professor document good correspondence letter). Likewise, trainees from minority groups may be affected most by the modern nation debates and trouble neighboring intolerance and social bias, accomplishing doubly difficult than ever along with them to check the request procedure, as well as assignments, load similar. Because of the pandemic and new development of difficulties to EDI, specific consideration to resources of subtle

discrimination may need to be given by examining board for the medical organization, trainee, and fellowships. Policies for preventing such prejudice since the approvals of admission will be intensified. A transparent dedication to sustaining EDI has been created by some organizations. Particular instruction to prevent unexpressed prejudice has been offered by the handbook from the Association of American Medical Colleges (AAMC) on online interviews (Kishore, et al., 2020).

Shift of Medical Education:

The mental stability load during the pandemic possibly assigned to expectant distress, along with a great level of disease and expiry, enhanced task engagements along with a substantial decrease in improvement duration, the influence of the disease on coworkers and relatives, financial factors, communal segregation, and social stresses, are additional reasons. health professionals, including learners, became intellectually and psychologically contested due to the considerable sickness and death taking place within a very short duration of time. Generally, psychological behavior in medical care has proved nonprofessional (Lewis, et al., 2022). Sometimes interns adapt the attribute of their instructors and are susceptible to emotional inhibition and patient convergence. A tradition of responsiveness and psychological contentment for every intern suppose to be highlighted by support of the organization, courses, and staff. This goal might be accomplished by providing faculty programs that switch interns from high-skill to low-skill duties, along with exact and convenient psychological healthiness, raising a setting that promotes the feeling of expression, and providing mental assistance in the form of daily meetings with interns. psychological wellness issues in particular anxiety distress, sleeplessness, and mood behavior, although with no pre-existent situation, may be aggravated by communal loneliness. healthcare professionals and interns combat loneliness similar to the common people due to diminished community involvement, decrease sensitive motivation, and reduced involvement with significant performance. Moreover to loneliness from lockdown and homestay instructions, prevention from other people's humiliation is probably observed by medical-care providers, which can promote aggravate isolation. It was observed by the WHO that healthcare personnel approach a higher chance for psychological well-being issues in addition to psychological upset from public isolation but also elaborates vulnerability to disease and death, staff and personal protective equipment

(PPE) deficiencies, and upstanding upset in the protection of the patient. In addition related problem is experienced staff deficiency for students' requests for jobs first time. Recruitment has been stopped in many organizations as a result of decreased funds due to pandemics. The full pressure of the mental well-being is an indicator on healthcare providers and learners is not identified, but it may be important. The public became promoted by professionals to remain online linked via cell phone, messages, email, and video calls. Managers have been motivated to contact the workforce to offer assistance and exchange data to reduce the impact of lack of communication. Management and staff became approached to refresh their interns frequently and promote online participation (Greenberg, et al., 2020). Escape is possibly evidence of distress psychological stress. Schedules must be achieved out to interns and staff who are absent in online lessons and discussions, because of combating mentally. Before this Covid, educational medical sectors throughout the state hold well-being efforts to avoid exhaustion. The corresponding action involved contemplation, exercise, homologous corresponding courses, and staff education is the main key within others. The success of the different curriculum in the progress field of experimentation. Various were effectively changed to computerized forums. Contemplation devices for instance Headspace supplied exceptional allowances for medical assistance employees. Due to the transitional shutdown of health clubs, online exercise lessons were launched by Doctors and advanced outcomes for instance "refresh place" were constructed at various clinics to deliver quality health care employees a place to relax. To promote noncontemporary education although interpersonal distance, teachers believed in web-based education and online meeting programs such as Google meet and Zoom. Face-to-face participation at preclinical lessons was decreasing although before the Covid, and learners were progressively watching online lectures. Generally, all face-to-face education, containing Ward, Problem based learning (PBL), Clinical base learning(CBL), were postponed during the initial phase of the pandemic. Ward rotations proceedings in particular clinical school orientation were restored by few organizations under Strict observation. The prospect of such academic courses doubtful leftovers. Educational conferences were mostly carried out online. Internship and fellowship curricula were transformed to electronic platforms containing journal newsletters and periodicals. An important issue of the outbreak was the elimination of clinical orientations among medical students, consequently restricting The creative chances for practical knowledge. Online teaching programs enhanced contact abilities in artificial

clinical events. While the complete effect and awareness of online teaching will only make obvious in the course of time. Creative combination of online portals and techniques with learning models are anticipated to chief learning presents in particular online and computer modeling based clinical orientations, informative computerized getaway platforms which permits up to date communication (Riva, et al., 2020).

Medical Students Serve as a Frontline workers:

Confronting an exceptional lack of skilled trainers, some secure options for developing the manpower, comprising utilizing skilled and submissive medical learners, were reviewed by the organization. Some states occupied their learner's initial phase as health-related staffs whereas scholars in Canada were drawn from clinical responsibilities. The majority of American medical schools who graduated contributed in manage medical service and were advised, along with assurances of adequate PPE. Regret, embarrassment, or emotional distress could be practiced by clinical learners not engaged with providing medical care or incompetent accordingly (DeWitt, et al., 2020). Learner involvement in managing medical treatment was limited by substitutive essential reasons. Several organizations had to restrict the number of group members present in inpatient rooms and carry out the physical checkup every day as well as preserve PPE. Medical and clinical material to guide the possibilities must be easily accessible to trainees enchanting in managing medical treatment. An inherent strategy for secure incorporating learners into medical service possibly offering medical care inside the medical school. Regular checkups by managing doctors can assist in constantly evaluating the demands of trainees. Organization must deliver adjustable investigation deadlines. Covid emergency centres to provide guidelines on signs and symptoms, emergency medical service were planned by medical students (Moris, et al., 2020).

Contemporary Training Sessions for Residents and Fellows

Interns are being posted from noncritical care subunits to the advanced wards, and intensive care units. A duty timing to raise Internee and fellow accessibility for Covid activity and patient protection. In a survey of residency program directors from New York City, 75% reported redeploying residents. Numerous great educational organizations employ monitored

doctor pyramid models that consist of different sets of professional and expert staff. Doctors in the clinical subgroup curriculum also faced a fall in clinics and out-patient care involvements significant to emerging capability in the particular area. To support positive informative learning, several courses were created by educational councils to assist significant educational meetings and fixed intellectual objectives. The secret curriculum comprises community and educational communication of clinical knowledge by internees that impact the experienced correspondences, performances, prospects, approaches, and prejudice of students (Kirch, et al., 2013). Several basic issues comprise ranking, patient empathy, sensitive control, the confines of treatment, equilibrium, and dedication. Under the hierarchal model of treatment, history of threatening, abuse, and mistreatment is entrenched in the instructor-student authority variance. The AAMC approved all training lessons shift to virtual form for 2020 to 2021 sessions. Some provisions became advanced to facilitate curriculum and interns browsing this innovative setup of cross-examining and department have a peaceful place and proper tools, and the device delivers training seminars for the members and has an alternate plan for the location, in particular, substitute interview schedule in case of technical error on the time of the interview. Directorates and organizations are required to be informed of ambivalence and make effort in the direction of reducing tension. Transparent, stable messages from examination councils and experienced institutions additionally with substitute Schedule, Charges exemptions, and modification in layout to virtual exam maybe support mitigate some of the concern. Assurance protection in the course of the exam has proven matter of concern. International Medical Graduates (IMG) facing exceptional difficulties. During the Covid pandemic, IMGs have confronted supplementary problems because of migration and journey-associated alterations. Around 4,500 entering interns who need visas confirmations were at chance of lost training places if their requests were not accepted by relevant consulates on time (Lee et al., 2021).

Rapid Contribution to Medical Literature:

The carefully selected online resource articles on updated clinical issues, treatment protocol, and new therapies for Covid. Infinite preprint articles were published. Multiple publishers speed up the publishing processes for Covid related material. A massive data-based survey accomplished that 88% of patients using mechanical ventilation died. The

quick Literature evaluation and survey company enterprise, which objectives to rapidly collect and crucially evaluate the latest publications on COVID-19, is a model of creative and well-evaluated guidance of information that may assist trainers to keep on the peak of the firehose of knowledge during a pandemic.

In the middle of January and March 2020, discussions about Covid on electronic media expanded quickly. Both precise and erroneous information has become publicized via electronic media (Albalawi, et al., 2019). Before the Covid pandemic, an investigation estimate medical tweets from occupational accounts on Twitter found that generally, 50% were incorrect based on professional survey. Although, health care associations perform a significant role in guiding health care providers to reliable sources and open-access informative data. Covid information for instance research articles, books, online seminars, and experts reports was developed by the emergency department of hospitals (Parvin, et al., 2021).

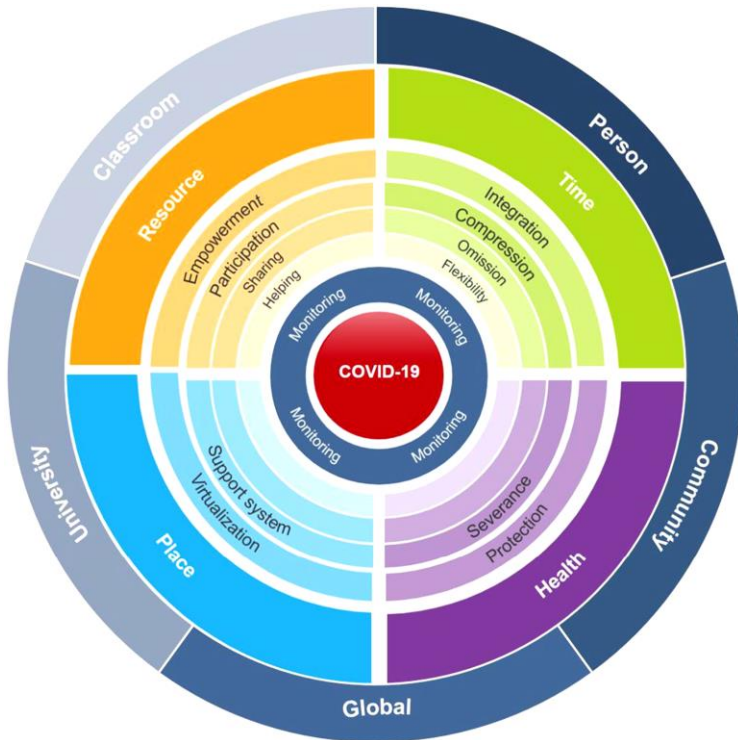
Relevant Mitigation Strategies in Medical Education During COVID-19

Here in this section of the chapter some of the effective strategies are highlighted in relevance to Mitigation in Medical Education during COVID-19

Following are the strategies to Mitigate impact during a pandemic

- Goal to deliver assistance to interns sharing in the Community Service Credit waive off schedule
- Provide economic advice to interns and instructors
- Provide funds grants for modern alteration of training
- Established resources from the institute or other funds benefits to become more alert of the implied influence
- Supply material to treat possibility stimuli (eg, neonatal care or adult care facilities)
- Adapt policies for act as in the consequences of breaches from excessively impact practice or cross-examine procedure.
- Develop and encourage agronomy of protection, prosperity, and understanding
- Interchange trainees' rotation timetable regularly

- Supply approachable psychological well-being material
- Supply material to keep in contact with friends and family members through social media
- Medical school attention and lecture programs for clinical depression
- Modernize and promote creativity in teaching delivery in a computerized manner
- Medical school precise fences to check that trainee engagement in managing patient communication activities are purposeful
- Enhance participation inconsequential care and pre-clinical activities, as well as survey and community service
- Deliver sufficient medical and clinical information to reorganized interns
- Supervise performance and evaluate the capability of interns independently
- Provide appropriate monitoring and encourage for interns, particularly those transferred from non-critically skilled professions
- Generate probability to review reallocation with the course and clinical management
- Establishment of the planned questioning method to prevent prejudice during face-to-face meeting
- Maintain resilience and unlock ways of transmission about continual modifications in examination programs
- Appreciate the insecurity and make strategy in instance examination required to be delayed or postponed
- Design program for recently commencement and permit alteration funds and time
- Promote graduating interns in employment in compliance with their immigration requirement
- Organize worldwide graduates within linked networks where immigration code would not be questioned
- Sustain justice of expert examination method in spite of the stress to publish the stream of data information
- Generate well-estimated publications banks that can be accurately used by educators and practitioners
- Consider the scope of the Health Insurance Portability and Accountability Act of 1996 and ensure patient confidentiality even when communion anecdotes
- Attentive establishment of material holding civil, community, personal and professional obligations in mind (Kaul, et al., 2021).



From: Medical education and COVID-19 pandemic: a crisis management model towards an evolutionary pathway

Contemporary approaches

Important key methods can directly be applicable and implemented worldwide, as the pandemic is influencing the educational system, internationally and there is a substantial switch towards online system. Firstly, adopt synchronous or asynchronous methods to boost flexible learning without the boundary of time and place. Secondly, promote personalized strategies of learning, such as in the case of online teaching. It is essential to use practical methods for students' involvement and participation, teaching based on their skills. Finally, acquiring modern technology in virtual education, specifically health-relevant areas. The epitome of technology may encompass a simple multimodal scientific method to advance progressing approaches, as per field. (Karimian, et al., 2021).

CONCLUSION

Experiences of the zones that were the toughest strike in the course of the pandemic resulted in significant and attentive modifications to conduct secure relocation of internees to fields of demand. The acceptance of electronic stands for both contemporary and noncontemporary categorized education was quickened by interpersonal distance during the Covid pandemic. Various difficulties were made by the prompt enhance in peer-reviewed and non-peer-reviewed literature in keeping the latest and guaranteeing precise conversion of information. The boundary of the standard peer review was proved by the pandemic. Electronic media contributed expeditiously distribute detailed knowledge, but the disputes of keeping confidential, professionalism, and avoiding the disperse of disinformation were amplified. Health educators, trainers, directors, and decision-making bodies in the modern regions have to try to transform the combatant of the COVID pandemic through suitable time to establish online courses. It can be achieved by modern e-learning and virtual video-supported medical student electives. The approaches of online surgical education during the COVID-19 pandemic can overcome many of the shortcomings of other online learning courses by highlighting an interdisciplinary live-streamed study experience and patient-facing telehealth visits, imitating an in-person rotation experience. Utilize advanced applications for education, not only that COVID but may be implemented for use wherever demonstrative methods of teaching are necessary for medical education. There were various possibilities for creation in medical training in the course of this pandemic, and a number of innovations were implemented successfully. The long-lasting effects on medical education by the pandemic need to be studied systematically.

By the application of the above methods, the key recommendations to consider. It is suggested that any new educational model should be assessed constantly by instructors and more technological approaches can be used for marking assignments. In addition, promote synergistic and interdisciplinary learning strategies. It is also important to pay attention to diversity, equity, and students' voice in the new online models (e.g., support methods are necessary to connect students to feel part of a group in new teaching and learning space). Finally, suggested the learning designs in a way to assist students to improve their self-learning, and at the same time, comprehensive learning in a virtual environment, and reduce the chance of surface learning

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