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## COVID-19: An impetus to reform paediatrics curriculum for undergraduate medical students in Iraq

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## RAPID COMMUNICATION

# COVID-19: An Impetus to Reform Paediatrics Curriculum for Undergraduate Medical Students in Iraq

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### Abstract

The beginning of COVID-19 infection in late 2019 in China and its global spread represent one of the stressful events of recent times. Apart from posing risks to the health, living, society, and economy, the COVID-19 pandemic has devastated various aspects of medical education. In this article, we have highlighted the journey of paediatrics curricular reform in Iraq with a special emphasis on the need to reform in the era of the pandemic. The reform is essential to arm undergraduate medical students with the necessary competency to deliver adequate paediatric healthcare to the community should COVID-19 infection comes roaring back.

*Keywords:* COVID-19, Curriculum, Reform, Paediatrics, Medical students, Iraq

## 1. Introduction

The concept of a five-star doctor encompasses the ideal profile of a doctor having a mixture of aptitudes to perform a range of services that a health setting must deliver to meet the requirements of relevance, quality, equity, and cost-effectiveness in health. It involves five sets of attributes, namely care-provider, communicator, decision-maker, community leader, and manager. Medical colleges have a critical role to play in this aspect [1].

Worldwide, the paediatrics profession is considered an important medical field. Consequently, paediatrics clerkships take part in graduating competent five-star doctors capable of offering the required health care needs of the community and encouraging a future career in paediatrics. Setting an up-to-date learning paediatrics curriculum could play a pivotal role in this regard.

## 2. Case history

Due to antecedents conflicts Iraq has engaged in over the past few decades with disastrous consequences, the issue of reforming the paediatrics curriculum was first evaluated in 2009. It was focused on developing a community-based curriculum, with a special emphasis on infectious diseases, nutritional problems, acute paediatric emergencies, and the growing issues of violence, drug abuse, truancy, and depression. However, the instability of the country and the absence of institutional strategies to reform medical education halted the attempt to reform the curriculum. In 2013, the curriculum was reformed, and integrated (student-centered, problem-based, and community-oriented) learning was introduced instead of traditional learning so that students will gain early clinical experience with the early clinical exposure while studying basic sciences and scientific learning extended into the clinical years. It was anticipated

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that such reform would improve the health care system and enhance the competencies and skills of students as well as it could positively influence the career choices of students toward clinical specialties, including paediatrics [2].

In late December 2019, COVID-19 has spread from Wuhan, China to many parts of the world. To avoid the discontinuation of medical education amidst the quarantine and lockdown measures in Iraq, the learning curriculum of pediatrics was reformed and e-learning was introduced during the academic year 2020. With the easing of tight restrictions in Iraq following the initiation of mass vaccination against COVID-19, blended learning was introduced during the academic year 2021 as an innovative solution to the challenges observed during the introduction of e-learning on one hand and sustaining the medical teaching in the continuing era of the COVID-19 pandemic on the other.

### 3. Discussion

Apart from its devastating aftermaths on health, economy, social context, and environment, the COVID-19 pandemic has caused unprecedented dramatic disruptions in every aspect of medical education worldwide [3]. These included the introduction of distance learning, disruption of clerkships, cancellation of licensing examinations, redeployment of teaching faculty, rallying student volunteers, and sheltering everyone at home [4].

In Iraq, teaching paediatrics discipline is allocated to fifth-year and sixth (final)-year students. The number of students in each stage is variable with each academic year depending on the number of students who successfully pass the examination in the antecedent stage. During the academic year 2022, 148 students at the fifth stage and 164 students at the final stage were recruited in the teaching process. They were assorted to attend a timetable of three days for e-learning and two days for live sessions per week. Each group of final-year students attended a paediatrics course for eight weeks compared to three weeks for the fifth-year students. The paediatrics clerkship at Al-Kindy College of Medicine includes eight members (three professors, three assistant professors, and two lecturers). The shortage in the number of teaching staff with regard to the high number of students has tremendously impeded the efforts to closely supervise the students and properly manage the learning process.

In response to the COVID-19 pandemic, clerkships around the world have started to reform the

learning curricula [5,6]. The pandemic has urged the paediatrics clerkship in Iraq to reform the curriculum and apply e-learning. The instructors utilized Google classroom to deliver audio-visual lectures and medical videos as well as set online scientific discussions with students on different topics in paediatrics. Seminars were presented by students and they took part in online summative and formative assessments. We believe that the reformed curriculum was not followed appropriately and e-learning was a little bit effective in maintaining students' knowledge and collaborative essence as well as commitment and dedication to paediatrics. Disrupted infrastructures, in particular disturbed electricity power and weak internet services, impaired technical skills, time limits, and absent institutional strategies, limited competency of the instructors to develop and deliver online materials, and negative attitudes of the good number of students toward e-learning environments are the major obstacles affecting the implementation of e-learning [7].

The COVID-19 pandemic has disrupted various aspects of paediatrics practice in Iraq resulting in an inability to provide regular care and follow up for patients with complex and chronic disorders, impaired diagnosis and treatment of paediatric sicknesses, the fear of developing communicable diseases correlated with the defective national vaccination schedule, and the risk of rising of conditions related to impaired neonatal screening tests [8]. The COVID-19 and associated restrictions have put the children in Iraq at risk for great changes in their daily lives, including home confinement, school closures, and social distancing rules. Low socioeconomic standards of families and low parental education are expected to increase psychosocial disorders such as anxiety, depression, domestic violence, molestation, neglect, and abuse, particularly among children with special needs. Therefore, students must be competent after graduation to handle the expected new pattern of paediatric disorders.

Although different vaccines have been manufactured to defeat COVID-19, the development of new variants of COVID-19 and the unavailability of a timetable for complete removal of COVID-19 restrictions in Iraq have led us to believe that the war against COVID-19 is not yet vanished and the aftermaths of the COVID-19 pandemic, particularly on medical education are everlasting. As a result, it is fundamental for the paediatrics clerkship to actively take part in reforming the learning curriculum for the forthcoming academic year 2022.

We believe that the curricular reform is not easy to tackle with the current unstable situation in Iraq. It needs collaborative efforts and teamwork of the paediatrics clerkships, governmental institutions, and students. There is a need to set national reference standards for paediatrics learning and implement modern programs to guarantee well-qualified students and graduates capable of filling the community health care needs. The reformed curriculum must be dynamic, responsive to external influences, and contain clear objectives, outcomes, and methods of students' assessment according to the constructed national standards.

In conclusion, the COVID-19 pandemic has offered an opportune period to reform the paediatrics curriculum in Iraq which must consider the expected change in the spectrum of paediatric disorders and the need to introduce innovative learning, assessment, and training tools as well as promoting the knowledge, competencies, and skills of students to properly manage sick children after graduation.

### Funding

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### Conflict of interest

None.

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